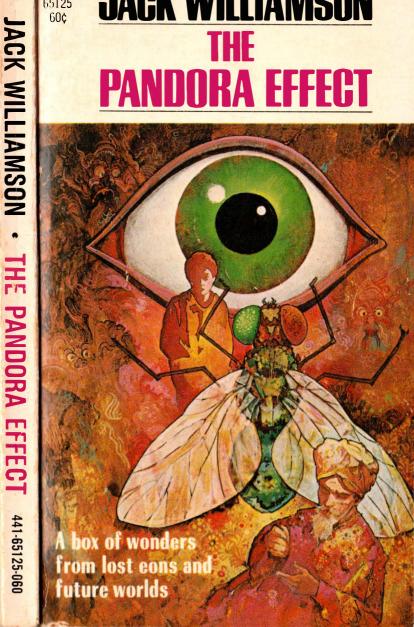


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JACK WILLIAMSON THE PANDORA EFFECT



AUTHOR'S INTRODUCTION

Pandora was the first woman, the temptress Eve, in the Greek myth of creation (as the poet Hesiod tells it). Man had already been created by Prometheus, the "Fore-Thinker," who then stole fire from heaven for him. The jealous gods created Pandora to even the score. Hephaestus shaped her loveliness. Hermes made her cunning. Aphrodite lent the lures of seduction. Zeus gave her the wonderful box and sent her as a gift to Epimetheus, the "After-Thinker"—who had been warned by his brother to accept no gifts from Zeus. Epimetheus ignored the warning and married Pandora. When she opened her gift box, all the future misfortunes of mankind flew out. Only Hope remained inside, trapped when the lid was shut again.

The Pandora Effect is the pattern of human behavior symbolized by the myth. Somebody who should know better compounds his own disaster. The effect comes in several versions. The victim may be one man or all mankind. The role of Zeus as cosmic trickster may be played by nature or by society or by our own unknowing selves. In human history, this ironic pattern is at least as old as the first man who made a fire to warm himself and woke to find the whole forest burning.

Although in recent years I have drifted into teaching literature, I don't claim that my own science fiction was written to fit any such academic theory. Yet, as I put together this first collection of my own stories, I'm surprised to see how many of them display some version of the Pandora Effect.

-JACK WILLIAMSON

JACK WILLIAMSON has also written for Ace Books:

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JACK WILLIAMSON THE PANDORA EFFECT

AN ACE BOOK

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Epimetheus had been warned. So had Adam, in the Hebraic story. In the presence of temptation, both ignored their warnings. For all their efforts to project the blame on Eve or Pandora, on the serpent or the gods, each asked for what he got. That's part of the Pandora Effect, The hero must invite his own doom.

Science has observed the effect; Freud defined one version of it, with his theory of the death-instinct. Literature has made free use of it, ever since Homer's Trojans dragged the hollow horse into their city. Poe studied men driven to kill themselves, in such tales as "William Wilson." Dostoevsky followed Poe, with "The Double" and "Crime and Punishment." as Stevenson did with "Dr. Jekull and Mr. Hude."

"The Happiest Creature" is built on a slightly different version of the Pandora Effect-the hero learns at the end that he himself is in the box. But the basic pattern is still man-against-himself. The hero has been duly warned, uet he won't give up the pursuit of his own calamity. The story was written for Fred Pohl and first published in Star Science Fiction.

(Psionics, incidentally, is a word that grates on me now from overuse, but it was new when I first began writing about the outsiders among us, in a story called "The Peddler's Nose." The word derives from an imagined future science, in which the psion is the quantum of mind.)

The collector puffed angrily into the commandant's office in the quarantine station, on the moon of Earth. He was a heavy hairless man with shrewd little ice-green eyes sunk deep in fat yellow flesh. He had a genial smile when he was getting what he wanted. Just now he wasn't.

"Here we've come a good hundred light-years, and you

can see who I am." He riffled his psionic identification films under the commandant's nose. "I intend to collect at least one of the queer anthropoids, in spite of all your silly red tape."

The shimmering films attested his distinguished scientific attainments. He was authorized to gather specimens for the greatest zoo in the inhabited galaxy, and the quarantine service had been officially requested to expedite his search.

"I see." The commandant nodded respectfully, trying to conceal a weary frown. The delicate business of safeguarding Earth's embryonic culture had taught him to deal cautiously with such unexpected threats. "Your credentials are certainly impressive, and we'll give you whatever help we can. Won't you sit down?"

The collector wouldn't sit down. He was thoroughly annoyed with the commandant. He doubted loudly that the quarantine regulations had ever been intended to apply to such a backward planet as Earth, and proposed to take his specimen without any further fiddle-faddle.

The commandant, who came from a civilization which valued courtesy and reserve, gasped in spite of himself at the terms that came through his psionic translator, but he attempted to restrain his mounting impatience.

"Actually, these creatures are human," he answered firmly. "And we are stationed here to protect them."

"Human?" The collector snorted. "When they've never got even this far off their stinking little planet!"

"A pretty degenerate lot," the commandant agreed regretfully. "But their human origins have been well established, and you'll have to leave them alone."

The collector studied the commandant's stern-lipped face and modified his voice.

"All we need is a single specimen, and we won't injure that." He recovered his jovial smile. "On the contrary, the creature we pick up will be the luckiest one on the planet. I've been in this game a good many centuries, and I know what I'm talking about. Wild animals in their native environments are invariably diseased. They are in constant physical danger, generally undernourished, and always more or less

frustrated sexually. But the beast we take will receive the most expert attention in every way."

A hearty chuckle shook his oily yellow jowls.

"Why, if you allowed us to advertise for a specimen, half the population would volunteer."

"You can't advertise," the commandant said flatly. "Our first duty here is to guard this young culture from any outside influence that might cripple its natural development."

"Don't upset yourself." The fat man shrugged. "We're undercover experts. Our specimen will never know that it has been collected, if that's the way you want it."

"It isn't." The commandant rose abruptly. "I will give your party every legitimate assistance, but if I discover that you have tried to abduct one of these people, I'll confiscate your ship."

"Keep your precious pets," the collector grunted ungraciously. "We'll just go ahead with our field studies. Live specimens aren't really essential, anyhow. Our technicians have prepared very authentic displays, with only animated replicas."

"Very well." The commandant managed a somewhat sour smile. "With that understanding, you may land."

He assigned two inspectors to assist the collector and make certain that the quarantine regulations were respected. Undercover experts, they went on to Earth ahead of the expedition, and met the interstellar ship a few weeks later at a rendezvous on the night side of the planet.

The ship returned to the moon, while the outsiders spent several months traveling on the planet, making psionic records and collecting specimens from the unprotected species. The inspector reported no effort to violate the Covenants, and everything went smoothly until the night when the ship came back to pick up the expedition.

Every avoidable hazard had been painstakingly avoided. The collector and his party brought their captured specimens to the pickup point in native vehicles, traveling as Barstow Brothers' Wild Animal Shows. The ship dropped to meet them at midnight, on an uninhabited desert plateau. A thousand such pickups had been made without incident, but that night things went wrong.

A native anthropoid had just escaped from a place of confinement. Though his angered tribesmen pursued, he had outrun them in a series of stolen vehicles. They blocked the roads, but he got away across the desert. When his last vehicle stalled, he crossed a range of dry hills on foot in the dark. An unforeseen danger, he blundered too near the waiting interstellar ship.

His pursuers discovered his abandoned car, and halted the disguised outsiders to search their trucks and warn them that a dangerous convict was loose. To keep the natives away from the ship, the inspectors invented a tale of a frightened man on a horse, riding wildly in the opposite di-

rection.

They guided the native officers back to where they said they had seen the imaginary horseman, and kept them occupied until dawn. By that time, the expedition was on the ship, native trucks and all, and safely back in space.

The natives never recaptured their prisoner. Through that chance-in-a-million that can never be eliminated by even the most competent undercover work, he had got aboard the

interstellar ship.

The fugitive anthropoid was a young male. Physically, he appeared human enough, even almost handsome. Lean from the prison regimen, he carried himself defiantly erect. Some old injury had left an ugly scar across his cheek and his thin lips had a snarling twist, but he had a poised alertness and a kind of wary grace.

He was even sufficiently human to possess clothing and a name. His filthy garments were made of twisted animal and vegetable fibers and the skins of butchered animals. His name

was Casey James.

He was armed like some jungle carnivore, however, with a sharpened steel blade. His body, like his whole planet, was contaminated with parasitic organisms. He was quivering with fear and exhaustion, like any hunted animal, the night he blundered upon the ship. The pangs of his hunger had passed, but a bullet wound in his left arm was nagging him with unalleviated pain.

In the darkness, he didn't even see the ship. The trucks were stopped on the road, and the driver of the last had left

it while he went ahead to help adjust the landing ramp. The anthropoid climbed on the unattended truck and hid himself under a tarpaulin before the truck was driven aboard.

Though he must have been puzzled and alarmed to find that the ship was no native conveyance, he kept hidden in the cargo hold for several days. With his animal craftiness, he milked one of the specimen animals for food, and slept in the cab of an empty truck. Malignant organisms were multiplying in his wounded arm, however, and pain finally drove him out of hiding.

He approached the attendants who were feeding the animals, threatened them with his knife, and demanded medical care. They disarmed him without difficulty and took him to the veterinary ward. The collector found him there, already scrubbed and disinfected, sitting up in his bed.

"Where we headed for?" he wanted to know.

He nodded without apparent surprise when the collector told him the mission and the destination of the ship.

"Your undercover work ain't so hot as you seem to think,"

he said. "I've seen your flying saucers myself."

"Flying saucers!" The collector sniffed disdainfully, "They aren't anything of ours. Most of them are nothing but refracted images of surface lights, produced by atmospheric inversions. The quarantine people are getting out a book to explain that to your fellow creatures."

"A good one for the cops!" The anthropoid grinned. "I bet they're still scratching their dumb skulls, over how I dodged 'em." He paused to finger his bandaged arm, in evident appreciation of the civilized care he had received. "And when

do we get to this wonderful zoo of yours?"

"You don't," the collector told him. "I did want exactly such a specimen as you are, but those stuffy bureaucrats wouldn't let me take one."

"So you gotta get rid of me?"

The psionic translator revealed the beast's dangerous desperation, even before his hard body stiffened.

"Wait!" The collector retreated hastily. "Don't alarm yourself. We won't hurt you. We couldn't destroy you, even to escape detection. No civilized man can destroy a human life."

"Nothing to it," the creature grunted. "But if you ain't

gonna toss me out in space, then what?"

"You've put us in an awkward situation." The yellow man scowled with annoyance. "If the quarantine people caught us with you aboard, they'd cancel our permits and seize everything we've got. Somehow, we'll have to put you back."

"But I can't go back." The anthropoid licked his lips nervously, "I just gut-knifed a guard. If they run me down

this time, it's the chair for sure."

The translator made it clear that the chair was an elaborate torture machine in which convicted killers were put to a ceremonial death, according to a primitive tribal code of blood revenge.

"So you gotta take me wherever you're going." The creature's dark, frightened eves studied the collector cunningly.

"If you put me back, you'll be killing me."

"On the contrary." The collector's thick upper lip twitched slightly, and a slow smile oozed across his wide putty face, warming everything except his frosty little eyes. "Human life is sacred. We can arrange to make you the safest creature of your kind—and also the happiest—so long as you are willing to observe two necessary conditions."

"Huh?" The anthropoid squinted. "Whatcha mean?"

"You understand that we violated the quarantine in allowing you to get aboard," the collector explained patiently. "We, and not you, would be held responsible in case of detection, but we need your help to conceal the violation. We are prepared to do everything for you, if you will make and keep two simple promises."

"Such as?"

"First, promise you won't talk about us."

"Easy enough." The beast grinned. "Nobody'd believe me anyhow."

"The quarantine people would." The collector's cold eyes narrowed. "Their undercover agents are alert for rumors of any violation."

"Okay, I'll keep my mouth shut." The creature shrugged. "What else?"

"Second, you must promise not to kill again." The anthropoid stiffened. "What's it to you?"

"We can't allow you to destroy any more of your fellow beings. Since you are now in our hands, the guilt would fall on us." The collector scowled at him. "Promise?"

The anthropoid chewed thoughtfully on his thin lower lip. His hostile eyes looked away at nothing. The collector caught a faint reflection of his thoughts through the translator, and stepped back uneasily.

"The cops are hot behind me," he muttered. "I gotta take

care of myself."

"Don't worry." The collector snapped his fat fingers. "We can get you a pardon. Just say you won't kill again."

"No." Lean muscles tightened in the anthropoid's jaws. "There's one certain man I gotta knock off. That's the main reason I busted out the pen."

"Who is this enemy?" The collector frowned. "Why is he

so dangerous?"

"But he ain't so dangerous," the beast grunted. "I just hate his guts."

"I don't understand."

"I always wanted to kick his face in." The creature's thin lips snarled. "Ever since we was kids together, back in Las Verdades."

"Yet you have never received any corrective treatment, for such a monstrous obsession?" The collector shook his head incredulously, but the anthropoid ignored him.

"His name is Gabriel Meléndez," the creature muttered. "Just a dirty greaser, but he makes out he's just as good as me. I had money from my rich aunt and he was hungry half the time, but he'd never stay in his place. Even when he was just a snotty-nosed kid, and knew I could beat him because I was bigger, he was always trying to fight me." The beast bared his decaying teeth. "I aim to kill him, before I'm through."

"Killing is never necessary," the collector protested uneasily. "Not for civilized men."

"But I ain't so civilized." The anthropoid grinned bleakly. "I aim to gut-knife Gabe Meléndez, just like I did that dumb guard."

"An incredible obsession!" The collector recoiled from the

grim-lipped beast and the idea of such raw violence. "What has this creature done to you?"

"He took the girl I wanted." The beast caught a rasping breath. "And he put the cops on me. At least I think it was him, because I got caught not a month after I stuck up the filling station where he works. I think he recognized me, and I aim to get him."

"No--"

"But I will!" The anthropoid slipped out of bed and stood towering over the fat man defiantly, his free hand clenched and quivering. "You can't stop me, not with all your fancy gadgets."

The beast glared down into the collector's bright little eyes. They looked back without blinking, and their lack of brows or lashes made them seem coldly reptilian. Abruptly, the an-

imal subsided.

"Okay, okay!" He spat deliberately on the spotless floor and grinned at the collector's involuntary start. "What's it worth, to let him live?"

The collector shook off his shocked expression.

"We're undercover experts and we know your planet." A persuasive smile crept across his gross face. "Our resources are quite adequate to take care of anything you can demand. Just give your word not to kill again, or talk about us, and tell me what you want."

The anthropoid rubbed his hairy jaw, as if attempting to think.

"First, I want the girl," he muttered huskily. "Carmen Quintana was her name, before she married Gabe. She may give you a little trouble, because she don't like me a bit. Nearly clawed my eyes out once, even back before I shot her old man at the filling station." His white teeth flashed in a wolfish grin. "Think you can make her go for me?"

"I think we can." The collector nodded blandly. "We can

arrange nearly anything."

"You'd better arrange that." The anthropoid's thin brown hand knotted again. "And I'll make her sorry she ever looked at Gabe!"

"You don't intend to injure her?"

"That's my business." The beast laughed. "Just take me

to Las Verdades. That's a little 'dobe town down close to the border."

The anthropoid listed the rest of his requirements, and crossed his heart in a ritual gesture of his tribe to solemnize his promises. He knew when the interstellar craft landed again, but he had to stay aboard a long time afterwards, living like a prisoner in a sterile little cell while he waited for the outsiders to complete their underground arrangements for his return. He was fuming with impatience, stalking around his windowless room like a caged carnivore, when the collector finally unlocked his door.

"You're driving me nuts," he growled at the hairless out-

sider. "What's the holdup?"

"The quarantine people." The collector shrugged. "We had to manufacture some new excuse for every move we made, but I don't think they ever suspected anything. And here you are!"

He dragged a heavy piece of primitive luggage into the room and straightened up beside it, puffing and mopping at his broad wet face.

"Open it up," he wheezed. "You'll see that we intend to keep our part of the bargain. Don't forget yours."

The anthropoid dropped on his knees to burrow eagerly through the garments and the simple paper documents in the bag. He looked up with a scowl.

"Where is it?" he snapped.

"You'll find everything," the fat man panted. "Your pardon papers. Ten thousand dollars in currency. Forty thousand in cashier's checks. The clothing you specified—"

"But where's the gun?"

"Everything has been arranged so that you will never need it." The collector shifted on his feet uncomfortably. "I've been hoping you might change your mind about—"

"I gotta protect myself."
"You'll never be attacked."

"You said you'd give me a gun."

"We did." The collector shrugged unhappily. "You may have it, if you insist, when you leave the ship. Better get into your new clothing now. We want to take off again in half an hour."

The yellow Cadillac convertible he had demanded was waiting in the dark at the bottom of the ramp, its chrome trim shimmering faintly. The collector walked with him down through the airlock to the car, and handed him a heavy little package.

"Now don't turn on the headlamps," the yellow man cautioned him. "Just wait here for daylight. You'll see the Albuquerque highway then, not a mile east. Turn right to Las Verdades. We have arranged everything to keep you very happy there, so long as you don't attempt to betray us."

"Don't worry." He grinned in the dark. "Don't worry a

minute."

He slid into the car and clicked on the parking lights. The instrument panel lit up like a Christmas tree. He settled himself luxuriously at the wheel, appreciatively sniffing the expensive new-car scents of leather and rubber and enamel.

"Don't you worry, butter-guts," he muttered. "You'll never

know."

The ramp was already lifting back into the interstellar ship when he looked up. The bald man waved at him and vanished. The airlock thudded softly shut. The great disk took off into the night, silently, like something falling upward.

The beast sat grinning in the car. Quite a deal, he was thinking. Everything he had thought to ask for, all for just a couple of silly promises they couldn't make him keep. He already had most of his pay, and old clabber-guts would soon be forty thousand miles away, or however far it was out to the stars.

Nobody had ever been so lucky.

They had fixed his teeth, and put him in a hundred-dollar suit, and stuffed his pockets with good cigars. He unwrapped one of the cigars, bit off the end, lit it with the automatic lighter, and inhaled luxuriously. He had everything.

Or did he?

A sudden uncertainty struck him, as dawn began to break. The first gray shapes that came out of the dark seemed utterly strange, and he was suddenly afraid the outsiders had double-crossed him. Maybe they hadn't really brought him back to Earth, after all. Maybe they had marooned him

on some foreign planet, where he could never find Carmen and Gabe Meléndez.

With a gasp of alarm, he snapped on the headlights. The wide white beams washed away all that terrifying strangeness, and left only a few harmless clumps of yucca and mesquite. He slumped back against the cushions, laughing weakly.

Now he could see the familiar peaks of Dos Lobos jutting up like ragged teeth, black against the green glass sky. He switched off the headlights and started the motor and eased the swaying car across the brown hummocks toward the dawn. In a few minutes he found the highway.

JOSÉ'S OASIS, ONE STOP SERVICE, 8 MILES AHEAD He grimaced at the sign, derisively. What if he had got his twenty years for sticking up the Oasis and shooting down old José. Who cared now if his mother and his aunt had spent their last grubby dimes, paying the lawyers to keep him out of the chair? And Carmen, what if she had spat in his face at the trial? The outsiders had taken care of everything.

Or what if they hadn't?

Cautiously, he slowed the long car and pulled off the pavement where it curved into the valley. The spring rains must have already come, because the rocky slopes were all splashed with wild flowers and tinted green with new grass. The huge old cottonwoods along the river were just coming into leaf, delicately green.

The valley looked as kind as his old mother's face when she was still alive, and the little town beyond the river seemed clean and lovely as he remembered Carmen. Even the sky was shining like a blue glass bowl, as if the outsiders had somehow washed and sterilized it. Maybe they had. They could do anything, except kill a man.

He chuckled, thinking of the way old baldy had made him cross his heart. Maybe the tallow-gutted fool had really thought that would make him keep his promises. Or was there some kind of funny business about the package that was supposed to be a gun?

He ripped it open. There in the carton was the automatic he had demanded, a .45, with an extra cartridge clip and

two boxes of ammunition. It looked all right, flat and black and deadly in his hand. He loaded it and stepped out of the car to test it.

He was aiming at an empty whisky bottle beside the pavement when he heard a mockingbird singing in the nearest cottonwood. He shot at the bird instead, and grinned when it dissolved into a puff of brown feathers.

"That'll be Gabe." His hard lips curled sardonically. "Coming at me like a mad dog, if anybody ever wants to know,

and I had to stop him to save my own hide."

He drove on across the river bridge into Las Verdades. The outsiders had been here, he knew, because the dirt streets were all swept clean, and the wooden parts of all the low adobe buildings were bright with new paint, and all he could smell was the fragrances of coffee and hot bread when he passed the Esperanza Cafe.

Those good odors wet his dry mouth with saliva, but he didn't stop to eat. With the automatic lying ready beside him on the seat, he pulled into the Oasis. The place looked empty at first and he thought for a moment that everybody was hiding from him.

As he sat waiting watchfully, crouched down under the wheel, he had time to notice that all the shattered glass had been neatly replaced. Even the marks of his bullets on the walls had been covered with new plaster, and the whole station was shining with fresh paint, like everything else in town.

He reached for the gun when he saw the slight dark boy coming from the grease rack, wiping his hands on a rag. It was Carmen's brother Tony, smiling with an envious adoration at the yellow Cadillac. Tony had always been wild about cars.

"Yes, sir! Fill her up?" Tony recognized him then, and dropped the grease rag. "Casey James!" He ran out across the driveway. "Carmen told us you'd be home!"

He was raising the gun to shoot when he saw that the boy only wanted to shake his hand. He hid the gun hastily; it wasn't Tony that he had come to kill.

"We read all about your pardon." Tony stood grinning at him, caressing the side of the shining car. "A shame the way

you were framed, but we'll all try to make it up to you now." The boy's glowing eyes swept the long car. "Want me to fill her up?"

"No!" he muttered hoarsely. "Gabe Meléndez-don't he

still work here?"

"Sure, Mr. James," Tony drew back quickly, as if the car had somehow burned his delicate brown hands. "Eight to five, but he isn't here yet. His home is that white stucco beyond the Acequia Madre—"

"I know."

He gunned the car. It lurched back into the street, roared across the Acequia bridge, skidded to a screaming stop in front of the white stucco. He dropped the gun into the side pocket of his coat and ran to the door, grinning expectantly.

Gabe would be taken by surprise. The outsiders had set it up for him very cleverly, with all their manufactured evidences that he had been innocent of any crime at all; and

Gabe wasn't likely to be armed.

The door opened before he could touch the bell, but it was only Carmen. Carmen, pale without her makeup but beautiful anyhow, yawning sleepily in sheer pink pajamas that were half unbuttoned. She gasped when she saw him.

"Casey!" Strangely, she was smiling. "I knew you'd come!" She swayed toward him eagerly, as if she expected him to take her in his arms, but he stood still, thinking of how she had watched him in the courtroom, all through his trial for killing her father, with pitiless hate in her dark eyes. He didn't understand it, but old puffy-guts had somehow changed her.

"Oh!" She turned pink and buttoned her pajamas hastily. "No wonder you were staring, but I'm so excited, I've been longing for you so. Come in, darling. I'll get something on and

make us some breakfast."

"Wait a minute!"

He shook his head, scowling at her, annoyed at the outsiders. They had somehow cheated him. He wanted Carmen, but not this way. He wanted to fight Gabe to take her. He wanted her to go on hating him, so that he would have to beat her and frighten her. Old blubber-belly had been too clever and done too much.

"Where's Gabe?" He reached in his pocket to grip the

cold gun. "I gotta see Gabe."

"Don't worry, darling." Her tawny shoulders shrugged becomingly. "Gabriel isn't here. He won't be here any more. You see, dear, the state cops talked to me a lot while they were here digging up the evidence to clear you. It came over me then that you had always been the one I loved. When I told Gabriel, he moved out. He's living down at the hotel now, and we're getting a divorce right away, so you don't have to worry about him."

"I gotta see him, anyhow."

"Don't be mean about it, darling." Her pajamas were coming open again, but she didn't seem to care. "Come on in, and let's forget about Gabriel. He has been so good about everything, and I know he won't make us any trouble."

"I'll make the trouble." He seized her bare arm. "Come

along."

"Darling, don't!" She hung back, squirming. "You're hurting me!"

He made her shut up, and dragged her out of the house. She wanted to go back for a robe, but he threw her into the car and climbed over her to the wheel. He waited for her to try to get out, so that he could slap her down, but she only whimpered for a Kleenex and sat there sniffling.

Old balloon-belly had ruined everything.

He tried angrily to clash the gears, as he started off, as if that would damage the outsiders, but the automatic transmission wouldn't clash, and anyhow the saucer ship was probably somewhere out beyond the moon by now.

"There's Gabriel," Carmen sobbed. "There crossing the

street, going to work. Don't hurt him, please!"

He gunned the car and veered across the pavement to run him down, but Carmen screamed and twisted at the wheel. Gabriel managed to scramble out of the way. He stopped on the sidewalk, hatless and breathless but grinning stupidly.

"Sorry, mister. Guess I wasn't looking—" Then Gabriel saw who he was. "Why, Casey! We've been expecting you back. Seems you're the lucky one, after all." Gabriel had started toward the car, but he stopped when he saw the

gun. His voice went shrill as a child's. "What are you doing?"

"Just gut-shooting another dirty greaser, that's all."
"Darling!" Carmen snatched at the gun. "Don't—"

He slapped her down.

"Don't strike her!" Gabriel stood gripping the door of the car with both hands. He looked sick. His twitching face was bright with sweat, and he was gasping hoarsely for his breath. He was staring at the gun, his wide eyes dull with horror.

"Stop me!"

He smashed the flat of the gun into Carmen's face, and grinned at the way Gabriel flinched when she screamed. This was more the way he wanted everything to be.

"Just try and stop me!"

"I-I won't fight you," Gabriel croaked faintly. "After all, we're not animals. We're civilized humans. I know Carmen loves you. I'm stepping out of the way. But you can't make me fight-"

The gun stopped Gabriel.

Queerly, though, he didn't fall. He just stood there like some kind of rundown machine, with his stiffened hands clutching the side of the car.

"Die, damn you!"

Casey James shot again; he kept on shooting till the gun was empty. The bullets hammered into the body, but somehow it wouldn't fall. He leaned to look at the wounds, at the broken metal beneath the simulated flesh of the face and the hot yellow hydraulic fluid running out of the belly, and recoiled from what he saw, shaking his head, shuddering like any trapped and frightened beast.

"That—thing!"

With a wild burst of animal ferocity, he hurled the gun into what was left of its plastic face. It toppled stiffly backward then, and something jangled faintly inside when it struck the pavement.

"Ît-it ain't human!"

"But it was an excellent replica." The other thing, the one he had thought was Carmen, gathered itself up from the bottom of the car, speaking gently to him with what now seemed queerly like the voice of old barrel-belly. "We had taken a great deal of trouble to make you the happiest one

of your breed." It looked at him sadly with Carmen's limpid dark eyes. "If you had only kept your word."

"Don't-" He cowered back from it, shivering. "Don't k-k-

kill me!"

"We never kill," it murmured. "You need never be afraid of that."

While he sat trembling, it climbed out of the car and picked up the ruined thing that had looked like Gabe and carried it easily away toward the Oasis garage.

Now he knew that this place was only a copy of Las Verdades, somewhere not on Earth. When he looked up at the blue crystal sky, he knew that it was only some kind of screen. He felt the millions of strange eyes beyond it, watching him like some queer monster in a cage.

He tried to run away.

He gunned the Cadillac back across the Acequia bridge and drove wildly back the way he had come in, on the Albuquerque highway. A dozen miles out, an imitation construction crewman tried to flag him down, pointing at a sign that said the road was closed for repairs. He whipped around the barriers and drove the pitching car on across the imitation desert until he crashed into the bars.

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The Pandora Effect requires the hero to collaborate in his own defeat, Commonly, however, he finds hostile outsiders that he can saddle with the blame. The chief trickster here is the Planet Venus-as it used to look before our space probes began reporting its deplorable climate. A time trip back into the earth's own past might have served the story as well.

This not-very-serious story was written for Amazing Stories. Founded by Hugo Gernsback in 1926. Amazing was the first magazine devoted to science fiction-Gernsback called it "scientifiction," until he coined the other term. By either name, to him, it was mostly sugar-coated science. He wanted the wonders explained.

"The Cosmic Express" was also influenced by Miles M. 1. Brever, a Nebraska physician who made a peru serious hobby of writing science fiction. I liked his stories and asked him to work with me. We published two joint efforts, a short story and then a novel about the settlement of the moon. A good teacher, he restrained some of my early impulses toward melodrama and insisted on solid craftsmanship and human themes. When "The Cosmic Express" came out. Breuer delighted me by writing that he liked #.

Mr. Eric Stokes-Harding tumbled out of the rumpled bed. A dashing figure in purple-striped pajamas, he smiled down at his sleeping bride and mechanically began his morning exercises. After the first deep bend, however, he groaned and turned to the open window.

Below him lay a smiling park. Terraced pyramids, widely spaced across it, towered up to the city roof. Above the glass, a winter blizzard was howling across this New York City of 2432 A.D. But he inhaled a fragrant breath of synthetic spring before he walked into his study.

Eric was an author. One end of the study was walled with his books, in their bright jackets and numerous editions. He wrote "thrilling action romances," as his agent put it, "of ages past, when men still knew the passion and fulfillment of primordial life."

He was impartial about the source of his thrills—just so they were far enough from the secure utopia around him. His hero was sometimes an ape-man roaring through the jungle with a bloody club under one arm and a lovely girl under the other, sometimes a hard-riding, hard-shooting cowboy from a prehistoric hacienda, sometimes a man marooned with his mate on a coral island.

A hundred million read Eric's novels or watched the video versions. They paid him handsome royalties and subconsciously shared his opinion that civilization had corrupted the natural nobility of men.

Now, just as he had settled down with his current hero to savor the rotting marrow-bones of a trapped mammoth, his slim bride came yawning into the study—lovelier, he thought than all his heroines.

Nada Stokes-Harding was also an author. She wrote lilting lyrics of the sea, of sunsets and meadow larks and nightingales, of wild flowers and ecstatic communion with nature. Men read her poems and called her a genius—even though her favorite birds and flowers were some centuries extinct and she had never seen a sunset.

"Eric, darling—" She paused to get their breakfast, frowning entrancingly as she selected the buttons to punch. "How can we stand all this?" She made a face toward the high-roofed park. "Cooped up here, so far away from the virgin nature we both love!"

"Progress." With a helpless shrug, he accepted his dish of synthetic fruit from the obedient machine. "I often wish we'd lived ten thousand years ago, before progress began."

"Can't we somehow escape?"

"There's nowhere to go. The old West, the Dark Continent, the South Seas—" Sadly, he bit into a hydroponic peach. "The last frontier was smothered under the city roofs, two hundred years ago."

"If we could only get to Venus! Last night I saw a science

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feature about it. The highest plateaus are wetter and cooler than anybody dreamed. Primitive continents, with primitive life. If we could somehow go there, without dragging all the trappings of this hateful civilization along—"

"Maybe we can!" The young author dropped the peach

and kissed his bride. "There's the Cosmic Express!"

"The cosmic which?"

"A new invention, just perfected."

"You know I don't bother with new inventions." She recovered the peach, "They've desecrated the temple of nature with billions of silly, artificial people doing silly, artificial things."

"But the Cosmic Express is really remarkable, dear. I heard about it from a young fan of mine, here in the New York office. It's a way to travel at the speed of light."

She nibbled the peach. "Isn't that impossible?"

"For mass, it is." He nodded. "But the mass of the passengers is turned into a beam of radiant energy. The beam has the speed of light. At the focal point, energy is changed back into mass."

"This focal point could be on Venus?"

"When the planet is in range. Just now it is."

"Could vou-" She caught her breath. "Can we really go to Venus?"

"I think that can be arranged." Grinning, Eric fumbled for a hidden spring under his desk. "My young friend is not supposed to move passengers anywhere except between the terminals his company is setting up around the world, but he has a weak point."

She slid off his lap and waited expectantly.

"A primitive psycho-chemical." He produced a small silver flash. "Called white mule. My friend read about it in my novels, and he has been begging to try it."

"Oh, Ericl" She dropped the peach again. "Let's go." Ten minutes later they were in a small waiting room, outside a tall chrome grille. A lazy, long-haired youth leaned on a counter. Behind him, half hidden by the grille, stood a huge, glittering machine.

"Queek!" A small man with a big black bag was dancing

"Hold on, Mister," drawled the long-haired boy. "We got a fare in transit now. Russian diplomat from Moscow to Rio. Your turn coming up. . . . That will be nine hundred eighty dollars. . . . Our service is still experimental, and we assume no responsibility for acts of God or solar flares. . . . Okay, now. We've got a clear channel to Paris."

The boy made change and opened a door in the grille.

"Lie down on the scanner plate," he instructed his fare.

"Hands at your sides. Lie still. Don't breathe after I count

three.... One, two, three ..."

He began punching buttons.

"Why, Mr. Stokes-Harding!" His voice came to life. "So this is the girl you were telling me about—" A bell jangled. "Sorry. Got another fare."

He punched buttons again, and waited for a very fat woman to come sailing through the grille, followed by a panting purple poodle.

"We want to go to Venus," Eric told him. "To the top of the polar plateau. If that ray of yours can land us there."

"Sorry, Mr. Stokes-Harding. I like your novels, but I can't do that. Under our temporary franchise, our operation is limited to sixteen designated stations—"

"Listen, Charley." Eric dropped his voice and glanced behind him. "If you're really interested in primitive psychochemicals, try a sniff of this." Cautiously, he displayed the silver flask. "Real white mule, just like our first ancestors drank."

The boy blinked twice at the flask, then snatched it out of Eric's hand.

"Real prehistoric alcohol!" He slipped it under the counter.
"I'd send you to heaven for this, if you'd give me the transmitter settings."

"Eric!" Nada squealed with delight. "We're really going native."

"I gotta warn you." The boy looked unhappy. "I gotta tell you Venus ain't no paradise."

"We'll build our own paradise."

"But you ain't seen Venus. I have. Through the finderscope. The lowlands are burnt-out desert, with nothing alive.

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The polar plateau is worse." He shivered. "Trees and weather and creatures."

"Nature in the raw!" Nada beamed. "We'll love it."

"I ain't so sure. How long you want to stay?"

"We'll take our time," Eric said. "Can you check on us

after a month of so?"

"'Fraid I can't. The planet's drifting out of range. The solar flares kick up interference. You'll be out of reach beyond the sun for almost a year."

Eric looked at Nada.

"We want a good taste of unspoiled nature," she said. "Give us a year."

"Make it an even year," Eric said. "We'll come back to

the landing point."

"Really I shouldn't—" The boy fumbled under the counter and smiled dreamily at the silver flask. "A real prehistoric mind-expander!" He reached quickly to open the door in the grille. "If anything happens, you asked for it."

Beyond the grille he showed them a narrow cell walled with glowing prisms and floored with a polished crystal slab.

"Lie down on the scanner plate," he called. "Hands at your sides. Don't breathe after I count three. . . . Snap it up, before I get a regular fare."

Eric helped Nada into the cell.

"Listen, Mr. Stokes-Harding," the boy's doubtful voice came after them. "If you're in some sort of trouble, I've got an arrangement with our Borneo agent. I could send you there—"

"Put us on Venus."

"Okay! You've bought yourselves a planet. Let me look for a better spot. . . . This might do. If you care for trees and weather. No big creatures in sight just now."

"Go ahead."

"I'll be drinking to you—" Bells were jangling, and the boy began counting. "One . . . two . . . three!"

Hot fire enveloped them.

The boy's voice was cut sharply off. The cold slab and the hot flame were gone. Eric felt something soft beneath him and splashing rain on his face. Nada lay beside him. They gasped and sat up, stained with black mud.

All around, the jungle rose, dark and strange and very wet. Vaguely palm-like or fern-like, gigantic trees tossed queer foliage toward the pouring clouds. They stumbled to their feet, dizzy with triumph.

"At last!" Nada whispered. "We're actually back to nature."

"We've escaped from the machine."

"Oh, Eric! You're so wonderful." She clung to him muddily.

"Just like one of your own heroes."

"You're perfect, Nada." He kissed her through the mud. "Things couldn't be nicer. But now we must be practical. First we must find a nice dry cave. We'll need a fire in front of the door, to keep those creatures out."

"We'll need clay for pottery." She wiped at the rain on her face. "We'll collect seed from edible plants, for our garden. You must save animal skins, for blankets and clothing."

"But first we must find a bed of flint," he said. "We need it for tools, and to strike fire with. Let's watch for virgin copper, too. It's found native, and we can work it with stone tools."

They set off across the polar plateau. Nada marched beside him for a little way, then floundered along behind. The rain kept up and the mud clung. They found neither copper nor flint.

"Eric, dear, I'm bogging down.". Nada halted, panting. "And I don't see any rocks. I think we'll have to use wooden tools, sharpened in the fire."

"Maybe you're right," he agreed. "This soil must be alluvial. I shouldn't be surprised if all the native stone and metal is buried out of reach."

"You can make a fire?" Her voice turned faintly anxious. "Can't you, dear?"

"Of course I can," he told her. "All I need is some dry sticks to rub."

They plodded on. The rain fell harder. The sky looked darker. The mud clung in bigger lumps. Dry wood seemed as rare as virgin copper.

"Didn't you bring any matches, dear?"

"Matches! Back to nature?"

She sniffled.

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"Sorry, darling."

"Don't mind me, dear. Just build us a fire." They blundered on. "While we're looking for wood, let's watch for

something to eat. I-I'm hungry, dear."

They looked for berry bushes and coconut palms and banana plants and nut trees, but nothing looked edible. Exhaustion stopped them at last. Nada lay sobbing in the mud while Eric leaned a few dead branches against a great uprooted tree to make a flimsy shelter.

"When the rain stops," he promised hopefully, "we'll do

better."

They crept inside.

"Night's falling." She shivered against him. "I-I wish we had a fire."

"So do I. Night will last months when it comes. Because the planet's rotation is so slow. But maybe this is just a storm."

From night or storm, darkness fell on the jungle. Wild winds howled over the unearthly trees. Something crashed in the undergrowth. Something roared.

"Wha- What's that?"

"I suppose it's the creatures Charley was talking about." He slapped at some smaller, stinging thing. "Maybe it won't find us."

Something roared again, nearer.

"Eric, dear-" Nada clung to him. "Do you think we can take a whole year of this?"

"It's nature, darling," he whispered stoutly. "The primal force of good. It will purify us. It will make us strong. We must be patient."

"I c-c-can't feel patient." She sobbed against him. "I c-c-can't help thinking about our old apartment. All our things and all our friends and hot food coming up whenever we punch a button." Her voice turned plaintively accusing. "And you c-c-can't even build a fire!"

"Sorry, darling." He swatted blindly at a larger crawling thing. "Maybe—" He gulped and hugged her to him. "Maybe I was wrong—"

A closer crash stopped his voice. Something splashed and

bellowed in the dark. Something struck the fallen tree. The flimsy roof fell on them. They crept out of the tangled branches into the cold, pelting rain.

"You take nature!" Nada gasped. "Give me civilization-"

Hot fire wrapped them.

Shivering and dripping, they lay on that crystal slab in the New York terminal of Cosmic Express. A small pink many-legged creature fell out of Eric's shirt, and he squashed it viciously.

"Right here, sir. You're safe now, miss. Let me give you a hand." A sweating, red-faced man leaned to help them out of the transmitter cell. "Believe me, sir, we're extremely sorry."

"So are we." Eric shuddered. "A dreadful experience!"

"I can't understand it." The official brushed at the clinging mud. I just arrived from Istanbul. Found our agent here half unconscious. Reeking of some vile psycho-chemical that my physician can't identify."

"I can-" Nada looked at Eric and caught her breath.

"I can't imagine!"

"Anyhow, his fares had been misrouted and his records were a mess. We revived him enough to tell us what he had done with you." The official wheezed for his breath. "A most regrettable accident! I do hope you won't demand excessive damages."

"By no means." Eric grinned weakly. "All I ask is that you don't punish your agent in any way. As for us—" He smiled weakly at Nada. "We're content just to get back to civilization."

Back in their apartment, the two young authors washed off the primitive muck of Venus. They punched buttons for a hearty supper and spent the next twelve hours in bed.

At the end of the month, Mr. Eric Stokes-Harding delivered a new novel to his literary agent. It was a redblooded romance of a man marooned on Venus with his lovely mate. The resourceful hero rubbed dry sticks to build a fire, fashioned tools of stone and virgin copper, and battled the enormous jungle saurians. At the breathless climax, besieged on a storm-beaten peak by hideous fire-bats from the

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low-lands, he made his own matter-transmitter and brought his girl back to earth.

The book was a thumping success.



THE METAL MAN

In 1925 I got out of a country high school, with nowhere else to go. Farm life in New Mexico was an unequal battle against the desert. I had discovered the excitement of science, but college was not yet in reach. The future looked forbidding, until Gernsback launched Amazing Stories. The wonder of "scientifiction" lifted me out of dust and drought and loneliness. I began writing eagerly, dreaming through the long days of farm work and hammering an old typewriter under a coal-oil lamp at night. Nothing nice happened for a couple of years, but in the fall of 1928 Gernsback published two items of mine, an editorial and the first version of this story.

The editorial, "Scientifiction, Searchlight of Science," was a romantic ode to science and progress. It showed scientific fiction lighting the way toward a future "that has conquered matter and Nature, distance and time disease and death." Today it seems naive—perhaps because too many people have opened too many wonderful boxes.

"The Metal Man," though laced with romantic mystery, glances at the other face of progress. Here, in fact, the Pandora Effect is three layers deep. There's a literal box, coffin-shaped, containing its own surprise. There's the uranium crater, where the hero find more than he is looking for. There's the unstable atom itself, which today is still a very ominous box. (The mood of the story owes something to A. Merritt, whose exotic atmospheres had fascinated me.)

The Metal Man stands in a dusty basement corner of the Tyburn College museum. Though the first excitement has subsided, his placement there is still an uneasy academic compromise, which so far has saved him from the scientists

who want to cut him up for biochemical analysis and the old friends who think he should be buried.

To the casual tourist, he is only a life-sized piece of timegreened bronze. A closer look shows the perfect detail of his hair and skin and the agony frozen on his face. A few visitors stop to frown at the peculiar mark on his chest—a red, six-sided blot.

People have almost forgotten now that he was once Professor Thomas Kelvin of the Department of Geology. Yet the rumors about him are still alive, growing stranger than the truth. Because those rumors are so distressing to his friends, the regents have at last agreed to let me publish his own narrative.

For four of five years, Kelvin had spent his vacations along the Pacific slope of Mexico, prospecting for uranium. That last summer, apparently he found it. Instead of returning to his classes in the fall, he asked for an extended leave.

We heard later that he had sold his uranium claims to a Swiss syndicate, that he was lecturing in Europe on the chemical and biological effects of atomic radiation, that he himself was under treatment at a clinic near Paris.

He came back to Tyburn on a gloomy Saturday afternoon, out of an early winter fog that was drifting off the Gulf Stream. I was at home, raking leaves on the seaward slope of my place below the campus, when I saw the boat coming in toward my rocky little scrap of Atlantic beach. The boat was a stranger—long and low and fast, of the sort once favored by runners of illicit rum or guns. I dropped my rake to watch.

Piloted with daring and skill, the boat threaded the offshore rocks toward the only yard of sand in half a mile. Four men sprang out, to rush it through the surf. A gaunt fifth man rose in the stern, calling quiet orders. The four ripped ropes and canvas from a coffin-sized box, which they carried up into my yard. The gaunt man limped stiffly to where I stood.

"Tyburn College?"

His men had dark Latin faces, but his scarred and weather-reddened features were masked with a curly yellow beard, and his voice had a Yankee twang. Impatiently, he stabbed

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a lean finger toward the campus bell tower, dim in the fog.
At last I nodded.

"Here we are." He murmured soft Spanish to his men. Grinning, they set the long box down. He looked at me. "Do you know a Professor Russell?"

"I'm Russell."

"If that's so, our job's done." He gestured at the chest. "It's for you."

"Huh? What is it?"

"You'll find out." His hard eyes narrowed. "I think you'll want to keep it quiet."

He spoke to his men again, and they moved the chest to my back porch.

"Wait! Who are you?"

"Just delivery men." He gestured gently. "We've been paid. We'll be on our way."

He nodded to his men, who hurried toward the boat.

"But I don't understand-"

"You'll find a letter in the box," he said. "It explains why your friend took this way home. You'll see why he didn't want to trouble the immigration people."

"My friend?"

"Kelvin. Look in the box."

He started back toward the boat.

"Just a minute!" I shouted after him. "Where are you going?"

"South." He paused very briefly. "Look in the box-and

give us twenty-four hours. Kelvin promised us that."

Not hurrying, he limped on down to the boat. His men pushed it off the sand. The muffled motors purred. Turning in the surf, the long craft slid between the rocks and vanished in the fog. I walked slowly back to the chest on the porch.

It was not locked. I lifted the lid-and dropped it back again. Lying in the box, stark naked, that queer blot stamped in livid red on the bronze-green breast, was the Metal Man.

A battered aluminum canteen lay beside his head, crusted with a purple stain. Beneath the canteen lay a sheaf of dog-eared pages covered with Kelvin's old-fashioned script.

I had to nerve myself to lift the lid again. I bent for a long

time, trembling and staring, unable to grasp what I saw. At last I stumbled into the house and read Kelvin's narrative:

"Dear Russell-

"Because you are my sanest friend, I have arranged to have my body and this manuscript delivered to you. Perhaps I am laying an unfair burden on you, but at this point I no longer trust myself. I am still uncertain what I really found in Mexico. I cannot decide whether these fragmentary facts should be published or suppressed. Nor can I cope any longer with those ruthless men who want to rob me of what they think I found. Though my death will not be easy, I'm afraid I die in greater peace than I leave behind me. "As you know, my goal last summer was the headwaters of

"As you know, my goal last summer was the headwaters of El Rio de la Sangre. This is a small stream that flows into the Pacific. The year before I had found a strong radioactivity in its red-stained waters, and I hoped to strike ura-

nium ores somewhere upriver.

"Twenty-five miles above the mouth, the river emerges from the Cordilleras. There are a few miles of rapids, and then the first waterfall. Nobody had ever been beyond the falls. I had reached their foot with an Indian guide, but failed to climb the cliffs beyond.

"Last winter I took flying lessons and bought a used airplane. It was old and slow, but suited to that rough country. When summer came, I shipped it to Vaca Morena. On the first day of July, I set out to fly up the river to its undiscovered source.

"Though I was still an unseasoned pilot, the old plane flew well. The stream beneath me looked like a red snake crawling down through the mountains to the sea. I followed it beyond the falls, into a region of towering peaks.

"The river disappeared in a narrow, black-walled gorge. I circled to look for a place to land, but the whole landscape was naked granite and jagged lava. I climbed over a high

pass and found the crater.

"An incredible pool of green fire, fully ten miles across, walled with dark volcanic rock. At first I thought the green was water, but its hazy surface had no waves. I knew it must be some heavy gas.

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"The high peaks around it still had snow. Their silver crowns were brushed with splendid color, crimson on the westward slopes, purple rising from shadows. That wild glory held me, even while the feel of it disturbed me-

"Night was near. I knew I should be turning back. Yet I stayed, wheeling over the crater, because I couldn't understand that pool of gas. As the sun sank lower, I saw stranger things. A thin greenish mist gathered over the peaks. It flowed down every slope into the pit, as if it fed that gas lake. Then something stirred the lake itself. The center of it bulged upward into a glowing dome.

"When the sluggish gas flowed back, I saw a huge red sphere rising out of the pit. Its surface was smooth, metallic, and thickly studded with great spikes of yellow fire. It spun very slowly on a vertical axis. Weird as it seemed, I

sensed purpose in its motion.

"It climbed above my own level and paused there, still spinning. Now I saw a circular spot of dull black over each pole of the sphere. I saw misty streamers from the peaks and the pool drawn into those spots, as if the sphere somehow inhaled them.

"For a little time the globe hung above me. The yellow spikes shone slowly brighter, until the whole object blazed like a great golden planet, while it sucked the last scraps of mist from the peaks. Suddenly, when they stood black and bare, it dropped back into that flat green sea.

"With its fall, a sinister shadow fell over the crater. With a start, I realized how much gasoline and daylight I had

used. At once I turned back toward the coast.

"More puzzled than afraid, I was trying to decide whether that thing from the pit had been natural or artificial, reality or illusion. I remember imagining that these enormous deposits of uranium might have unforeseen effects. It occurred to me, too, that perhaps somebody had got here ahead of me, and that perhaps I had seen the trail of an atomic ship.

"With a shock of real alarm, I saw a pale blue glow spreading over the cowling of the cockpit. In a moment the whole plane, and even my body, was covered with it. I

gunned the motor and tried to climb.

"Though the motor labored, I couldn't climb. Some queer

G-force, connected I thought with that blue glow, was pulling me now. Dizziness dulled my thoughts, and my heavy arms began to drag at the controls.

"I had to dive, to keep flying speed. Almost before I knew what was happening, I plunged into that gas lake. It was not suffocating, as I had expected. Though it cut visibility to just a few yards, I noticed no odor or other sensation.

"A dark surface loomed under me. I pulled out of the dive and managed to land on a smooth plain of coarse red sand. Like the green gas, the sand was dully luminous.

"For a time I was confined to the cockpit by my own weight, but slowly that blue glow faded, along with its effect. I climbed out of the plane with my canteen and my automatic pistol, which were themselves still immensely heavy.

"Unable to stand erect, I crawled away across the sand. I felt sure that I had been brought down by something intelligent. I was deathly afraid, yet soon I had to stop and rest.

"Lying there, perhaps a hundred yards from the plane, I saw five blue lights drifting toward it through the fog. I lay still and watched them wheel around the plane. Their motion was heavy and slow. The mist made dull halos around them. They had no structure that I could see.

"At last they lifted back into the haze, and I went on. Though my excess gravity had faded way, I went on hands and knees until the plane was out of sight. When I stood up, my sense of direction was gone.

"A helpless fear swept over me. Bright red sand and thick green fog—that's all I could see. No landmark, not even a moving light. The soundless air pressed down like a shapeless weight. I trembled with a panic sense of utter isolation.

"I don't know how long I stood there, afraid of moving in the wrong direction. Suddenly a light darted above me, like a blue meteor. In my alarm, I ran from that. After a few blundering steps, my foot struck something that rang like metal.

"The clatter froze me with new terror, but the light moved on. When it was gone, I bent to see what I had kicked. It was a metal bird—an eagle formed of metal—wings out-

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spread, talons grasping, beak set open. Its color was a tarnished green.

"At first I took it for a cast model of a real bird, but then I found each feather separate and flexible—as if a living eagle had been turned to metal. I remembered that fissioning uranium transmutes itself to lead, and wondered if intense radiation could transmute the tissues of a bird.

"Fear seized me, for my own body. Anxiously I began to look for other transformed creatures. I found them in abundance scattered over the sand or half-buried in it. Birds, large and small. Flying insects, most of them strange to me. Even a pterosaur—a flying reptile that must have reached the pit long ages past.

"Scrabbling to dig it out of the glowing sand, I saw a green glint from my own hands. The tips of my fingernails and the fine hairs on the back of my hands were already

changed to light green metal!

"The shock of that discovery unnerved me completely. I screamed aloud, careless of what might hear, and ran off in blind panic. I forgot that I was lost. Reason and caution were left behind. I felt no fatigue as I ran—only black terror.

"Bright, swift lights passed above me in the green, but I gave them no heed. Unexpectedly, I came up to the great sphere I had seen from above. It rested motionless in a black metal cradle. The yellow fire was gone from the spikes but a score of blue lights floated above it like lanterns swinging in a fog.

"I turned and ran again. Direction didn't matter. Neither did time. What stopped me at last was a bank of queer vegetation. The stuff was violet in color, waist-deep and grasslike, with narrow spikes for leaves. The tallest center spikes were tipped with pink blooms and little purple berries.

"A sluggish red stream ran through the thicket—I thought it must be El Rio de la Sangre. Here, anyhow, was cover from the flying lights. I threw myself down in the deep tangle and lay there sobbing.

"For a long time, I couldn't stir or think. When at last I inspected my fingernails, the green tips looked wider. Fran-

tically I gnawed at them, but the hideous fact refused to go away. I was changing into metal.

"Wildly I groped for a way to escape. I had to scale the crater walls or else recover the plane, yet I felt too weak to move. Though I felt no actual hunger. I thought food might give me strength.

"Recklessly, I picked a few of those purple berries. They had a salty, metallic taste. I spat them out, afraid they would make me ill. But, in pulling them, I had got the juice on my fingers. When I wiped it off, I found, to my amazement and my inexpressible joy, that the metal rim was gone from the nails it had touched.

"I had found hope. The evolution of the plants, I thought, must have produced something that resisted transmutation. I stuffed myself with berries till I began to feel sick, then poured the water from my canteen and squeezed juice to fill it.

"Since then I have analyzed the fluid. Some of its constituents resemble the standard formulas for the treatment for X-ray burns. It doubtless saved me from the terrible burns caused by gamma radiation.

"I lay there till dawn, dozing sometimes in spite of my terror. Sunlight must have filtered down through that pool of gas. By day the green faded to a greenish gray, and even the red sand seemed less luminous.

"All the green, I found, was now gone from my nails and hair. Immensely cheered by that, I ate another handful of the berries and set off along that little river. I walked downstream, counting my paces.

"Before I had gone three miles, I came to the pitchblende cliffs. Abrupt and black, they towered up as far as I could see into the thick green gloom. The river disappeared be-

neath them, in a roaring pool of red foam.

"This, I felt sure, must be the west rim of the crater. I turned north beneath that unclimbable wall. Still I had no definite plan, except to find a path across the cliffs, I kept alert for those floating lights and looked for a slope or a chimney that I could climb.

"I plodded on until it must have been noon, though my watch had stopped. Sometimes I stumbled over more things

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that must have been alive when they fell from above. Uprooted trees. Birds of every sort. A huge green bear, its breed long extinct.

"At last I found a break in that vertical wall—a wide flat shelf with an inviting slope above it. But that ledge was a good sixty feet above me. I tried to reach it and slid back, again and again, until my hands were bleeding. I gave up and went on.

"Somewhere beyond, groggy with exhaustion and despair, I staggered into a city of the flying lights—that's what it must have been. Slim black towers stood scattered across the red sand. Each one was topped with a great mushroom of orange flame.

"Fresh terror paralyzed me, but I heard no sound and saw no motion. Crouching under the overhanging cliff, I tried to take stock. The flying lights, I now suspected, were not active by day—but I felt sick with dread of the night.

"By my reckoning, I had made about fifteen miles from the river. Now I must be somewhere along the east wall of the crater, with a good half of the cliffs still ahead. To explore them, I had to pass that city of flames, yet I dared not enter it.

"I left the rim, to walk around the city. I tried to keep those tall flares in view, but somehow I lost them. I veered to the left, but all I found was more flat sand, smothered under dull green murk.

"On and on I wandered, until the sand and the air grew brighter. Dusk had fallen. The floating lights were soon in motion. The night before, they had gone straight and high and fast. Now they were low, uncertain, slow. I knew they were searching—for mel

"I scooped out a shallow trench in the sand and lay there shivering. Mist-veiled points of light came near and passed. Another stopped, directly overhead. It sank toward me. Its pale halo grew. Paralyzed with terror, I could only wait.

"Down and down it came, until I saw its form. It was a crystal thing. I watched it with a sick fascination. A dozen feet long, it had an intricate structure like a crystal of snow. The heart of it was a blue, six-pointed star. An upright prism pierced the star. Blue fire pulsed through it, flow-

ing inward from the points of the star, and threads of bright scarlet trailed outward from the faces of the prism. Neither animal nor plant nor even machine, it was alive—alive with light!

"It fell straight toward me.

"In a reflexive act of panic, I pulled my automatic and fired three shots. The bullets glanced off those glittering planes and whined away into the fog.

"It paused above me. Those threads of red fire trailed down around me, questingly, somehow caressingly. They wound around my body—and I felt my weight drained out. They lifted me against the crystal prism. You may see its mark on my chest.

"That contact stunned me with blinding pain. My whole body writhed, as if from a cruel electric shock. Dimly, I knew the thing was rising with me. I had a sense of other crystal creatures swarming near. But my mind was fading out.

"I awoke floating free in a brilliant orange cloud. For a moment I felt elated, but then I found I couldn't move, couldn't even turn my body. I reached and kicked and twisted, but I could touch no solid object. Though nothing held me, I was helpless as a turtle on its back.

"My body was still clothed. My canteen still hung—or floated—by my shoulder. My automatic was still in my jacket pocket, solid but weightless. Yet somehow I knew that days had passed.

"Struggling to move myself, I felt a queer numb stiffness in my side. I ripped my shirt open and found a new scar there, almost healed. I believe those creatures had cut into me—exploring my body, I suppose, as I had explored their world.

"I must have blacked out again when I felt the hardened granular deadness of the skin over my chest and found that red, six-sided print. Yet that discovery brought me to some limit of emotion. I woke in a mood of remote detachment, as if I didn't really care.

"But my side still hurt. The orange cloud was still around me. My crystal captor was drifting in it with me, not a dozen yards away. In my cool unconcern, I knew that I was trapped

THE METAL MAN

in the mushroom cloud above one of those towering cylinders,

a prisoner in that alien city of flame.

"For a time I simply floated there, weightless as a man in space, watching my own predicament from that mood of aloof abstraction. Indifferently, I observed that the vital fire had ceased to pulse inside the crystal creature. It was sleeping, I supposed, till night came again.

"That chain of thought lit a faint spark of hope in me. Once more I kicked and clawed at the cloud around me. With nothing to push against, I failed to move an inch.

"While I struggled like a bug on a pin, that cold flame grew slowly brighter around me. Night, I knew, was falling. The crystal things would soon awake, no doubt to resume the vivisection of their human guinea pig.

"I could see only one way to cheat them. I was pulling my automatic to put a bullet into my own head, when a better idea hit me. I fired six quick shots out into the fog.

"That move saved me. A rocket needs nothing to push against. The gun was a sort of rocket. The recoil of each explosion nudged me farther from the sleeping crystal. I slid out of the mushroom cloud.

"Gravity caught me again, at first very gently. Drifting down to the luminous sand, I found my airplane drawn up to the foot of that slim black tower. It was intact. The motor balked for a moment, as if my captors had been into it as well as into me. At last it caught. I took off blind—"

At this point, there's a break in the manuscript. The remaining lines are on another tattered page. They seem to be in Kelvin's old-fashioned hand, but here it is a ragged pencil scrawl, not always readable.

"End of my [rope?] Guess I diluted the [canteen?] too many times. My body and effects I will to science. Captain Gander will supply the [conclusion?] of my story. The frightening [truth?]—"

That was all.

I called my physician. He's a sour-featured Scotch Presbyterian who doesn't care for the twentieth century. He

read the manuscript with an air of indignant unbelief, scowled over the transmuted body, and dourly advised me to keep the story quiet.

That might have been prudent, but it proved impossible. Too many people heard tantalizing rumors. Some came. I'm afraid, from my faculty colleagues at Tyburn, Others, I'm sure, did not,

Though Captain Gander has never come forward with whatever he knows, we tried to learn the rest of the story. That next summer, three of us from Tyburn chartered our

own airplane and flew to western Mexico.

We easily found the coastal village that Señor Kelvin had visited once-but not, its people insisted, within the past three years. We talked to the men who had guided him back into the high sierra; we even followed up the rocky bed of that mountain stream where he had hunted uranium. Its waters were now neither red nor radioactive, however, and its source was only a boggy spring.

Flying over that spring and the peaks beyond, we found no crater filled with glowing gas, but only another stoneand-adobe pueblo three hundred years old. When we landed there, we discovered no metal birds or living crystals or atomic ships. We did, however, hear of three strangers who had been there before us.

One was a limping, bearded gringo, who had asked mad questions and cursed those who could not answer to please him. One was an elegant Swiss banker, who had wandered about the pueblo carrying a Geiger counter and staring at everybody with a monocle like an evil eye. The third was another gringo, who had come three summers from the north and driven on into the high Cordillera, hauling tarpcovered crates in an old military truck.

Among such confusing clues, we lost Kelvin's trail in Mexico. There were other mysterious strangers, however, who followed us back to Tyburn. Some of them were federal investigators, who questioned all of us, searched Kelvin's premises, photocopied his documents, and finally carried his transmuted body away for study by the AEC.

When they finally returned the body to Tyburn, they were remarkably tight-lipped and silent, even for federal men.

THE METAL MAN

No official report has ever mentioned the Metal Man, and the rumors that still circulate, sometimes, around him are wildly contradictory.

Part of the truth had been concealed, but I don't know who to blame. There's Captain Gander—who surely owns another name, and quite possibly doctored Kelvin's manuscript. There's the Swiss banker—who used to sit in the cantina reading a French translation of Wells' Time Machine, never talking to anybody. There's the AEC—whose agents certainly learned more than they ever told. There's Kelvin himself—who may have been lying to hide what he actually discovered.

But I've come to believe that Kelvin's story is true. I spent a good many sleepless nights reviewing all the conflicting evidence, until the time I had a vivid dream of strangers visiting the earth, perhaps to refuel their atomic ship, which lay hidden in time as well as space while they were collecting and preserving stray specimens of pterosaurs and men.

However that may be, Kelvin's metal body, standing nude and scarred and dusty now in its gloomy corner, is proof enough that he did discover more than he was looking for. His lips are frozen in a green ironic smile, almost as if he is aware that Civil Defense has designated the museum basement where he stands as an emergency fall-out shelter.

THE COLD GREEN EYE

Here the Pandora Effect is nearly pure. The wonderful box is an actual teakwood chest, which the small hero brings with him to Kansas. The Pandora is his fly-swatting aunt. The cosmic joker is fate, here represented through

the hidden powers of the monks of Mahavira.

"The Cold Green Eye" was written late in 1944, while I was in a replacement depot near Manila, sweating out my shipment home. After I had visited the liberated Filipinos and their war-scarred city and the awesome ruin of Cavite, I began writing a story a day. These stories were brief irontes, planned for no particular markets. The one I like best was "The Raja McCarthy and the Jungle Tomato," a satiric sketch of a gang of black market kings with whom I shared a tent. That story never sold. Perhaps it's easier to believe in the holy monks than in American black marketeers. The editors preferred "The Cold Green Eye"—even though I have never known a sacred Jain, nor, fortunately, any woman quite so deadly as Aunt Agatha Grimm.

"Kansas?" The boy looked hard at his teacher. "Where is Kansas?"

"I do not know." The withered old monk shrugged vaguely. "The spring caravan will carry you down out of our mountains. A foreign machine called a railway train will take you to a city named Calcutta. The lawyers there will arrange for your journey to Kansas."

"But I love our valley." Tommy glanced out at the bamboo plumes nodding above the old stone walls of the monastery garden and the snowy Himalaya towering beyond. He turned quickly back to catch the holy man's leathery hand. "Why must I be sent away?"

"A matter of money and the law."

"I don't understand the law," Tommy said. "Please can't I stay? That's all I want—to be here with the monks of Mahavira, and play with the village children, and study my lessons with you."

"We used to hope that you might remain with us to become another holy man." Old Chandra Sha smiled wistfully behind the cloth that covered his mouth to protect the life of the air from injury by his breath. "We have written letters about your unusual aptitudes, but the lawyers in Calcutta show little regard for the ancient arts and those in Kansas none at all. You are to go."

"I don't need money," Tommy protested. "My friends in the village will give me rice, and I can sleep in the courtyard

here-"

"I think there is too much money, burdening souls with evil karma," the lean old man broke in softly. "Your father was a famous traveler, who gathered dangerous riches. Since the wheel has turned for him, others desire his fortune. I think perhaps that is why the lawyers sent for you."

A fly came buzzing around his dried-up face, and he

paused to wave it very gently away.

"Your mother's sister lives in that place named Kansas," he went on. "It is arranged for you to go to her. She is your own race and blood, and she wants you in her home—"

"No! She never even saw me," Tommy whispered bitterly.

"She couldn't really want me. Must I go?"

"It is to be." Chandra Sha nodded firmly. "Your people are ignorant about the true principles of matter and the soul, but their own peculiar laws require obedience. The caravan leaves tomorrow."

Tommy wanted not to weep, but he was only ten. He

clung sobbing to the thin old Jain.

"We have instructed you well," the holy man murmured, trying to comfort him. "Your feet are already on the pathway to nirvana, and I will give you a copy of the secret book of Rishabha to guide and guard you on your way."

Tommy went down out of the mountains with the caravan. He was bewildered and afraid, and the motion of the railway cars made him ill, but the lawyers in Calcutta were kind enough. They bought him new garments, and took him to a

THE COLD GREEN EYE

cinema, and put him on a great strange machine called an airplane. At last he came to Kansas and his Aunt Agatha Grimm.

He rode from the depot to her home in a jolting farm truck, peering out at the strange sun-flooded flatness of the land and a monstrous orange-painted machine called a combine that grazed like the golden bull of Rishabha through the ripe wheat.

The hired man stopped the truck beside a huge wooden house that stood like a fort in the middle of the endless land, and Tommy's aunt came out to greet him with a moist kiss. A plump, pink-skinned blonde, with a sweet, smooth, sweat-beaded face. He was used to darker women, and she seemed incredibly fair.

"So you're Lizzie's boy?" She and her sister had come from Alabama, and soft Negro accents still echoed in her voice. "Gracious, honey, what's the matter?"

Tommy had run to meet her eagerly, but he couldn't help shrinking back when he saw her eyes. The left was warm and brown and kind as old Chandra Sha's. But the right eye was different, a frosty, greenish blue; it seemed to look straight through him.

"Well, child, can't you talk?"

He gulped and squirmed, trying to think of words to say in English. But he couldn't think at all. Somehow, the blue eye froze him.

"Nothing," he muttered at last. "Just-nothing."

"Lizzie's boy would be a little odd." She smiled, too sweetly. "Brought up by jabbering heathens! But this is going to be your home, you know. Come on inside. Let me clean you up."

The hired man brought the carved teakwood chest the monks had given him, and they went into the big house. The smell of it was strange and stale. The windows were closed, with blinds drawn down. Tommy stood blinking at the queer heavy furniture and dusty bric-a-brac crammed into the dim cave of the living room, until he heard a fly buzzing at the screen door behind him. He turned without thinking to help it escape.

"Wait, honey." His aunt caught his arm, to seat him firmly on the teakwood chest. "I'll kill it!"

She snatched a swatter from the high oak mantle and stalked the fly through the gloomy jungle of antimacassared chairs and fussy little tables to a darkened window. The swatter fell with a vicious *thwack*.

"Got him!" she said. "I won't endure flies."

"But, Aunt Agathal" The English words were coming back, though his thoughts were still in the easy vernacular the monks had taught him. His shy, hesitant voice was shocked. "They, too, are alive."

The brown eye, as well as the blue, peered sharply at him. His aunt sat down suddenly, gasping as if she needed fresh air. He wanted to open the windows, but he was afraid to move.

"Thomas, honey, you're upsetting me terribly." Her pale fat hands fluttered nervously. "I guess you didn't know that I'm not well at all. Of course I love children as much as anybody, but I really don't know if I can endure you in the house. I always said myself that you'd be better off in some nice orphanage."

Or back with the monks, Tommy told himself unhappily. He couldn't help thinking that she looked as tough and strong as a mountain pony, but he decided not to say so.

"But sick as I am, I'll take you in." Her moist, swollen lips tried to smile. "Because you're Lizzie's boy. It's my duty, and the legal papers are all signed. The judge gave me full control of you, and your estate, till you come of age. Just keep that in mind."

Nodding miserably, Tommy huddled smaller on the chest. "I'm giving you a decent home, so you ought to be grateful." A faint indignation began to edge her voice. "I never approved when Lizzie ran away to marry a good-for-nothing explorer—not even if his long-winded books did make them rich. Served her right when they got killed, trying to climb them foreign mountains. I guess she never had a thought of me—her wandering like a gypsy queen through all them wicked heathen countries, never sending me a penny. A lot she cared if her own born sister had to drudge away like a common hired girl!"

THE COLD GREEN EYE

Sudden tears shone in the one brown eye, but the other

remained dry and hard as glass.

"What I can't forgive is all she did to you." Aunt Agatha snuffled and dabbled at her fat, pink nose. "Carrying you to all those outlandish foreign places. Letting you associate with all sorts of nasty natives. The lawyers said you've had no decent religious training. I guess you've picked up goodness knows what superstitious notions. But I'll see you get a proper education."

"Thank you very much!" Tommy sat up hopefully. "I want to learn. Chandra Sha was teaching me Sanskrit and Arabic. I can speak Swahili and Urdu, and I'm studying the secret

book of Rishabha-"

"Heathen idolatry!" The blue eye and the brown widened in alarm. "Wicked nonsense you'll soon forget, here in Kansas. Simple reading and writing and arithmetic will do for the like of you, and a Christian Sunday school."

"But Rishabha was the first Thirtankara," Tommy protested timidly. "The greatest of the saints. The first to find nirvana."

"You little infidel!" Aunt Agatha's round pink face turned red. "But you won't find—whatever you call it. Not here in Kansas! Now bring your things up to your room."

Staggering with the teakwood chest, he followed her up to a narrow attic room. Hot as an oven, it had a choking antiseptic smell. The dismal, purple-flowered wallpaper was faded and water-stained. At the tiny window, a discouraged fly hummed feebly.

Aunt Agatha went after it.

"Don't!" Tommy dropped the chest and caught at her swatter. "Please, may I just open the window and let it go?"

"Gracious child! What on earth?"

"Don't you know about flies?" A sudden determination steadied his shy voice. "They, too, have souls. And it is wrong to kill them."

"Honey child, are you insane?"

"All life is akin, through the Cycle of Birth," he told her desperately. "The holy Jains taught me that. As the wheel of life turns, our souls go from one form to another—until

each is purged of every kamma, so that it can rise to nirvana."

She stood motionless, with the swatter lifted, frozen with astonishment.

"When you kill a fly," he said, "you are loading your own soul with bad karma. Besides, you may be injuring a friend."

"Well, I never!" The swatter fell out of her shocked hand. Tommy picked it up and gave it back to her, politely. "Such wicked heathen foolery! We'll pray, tonight, to help you find the truth."

Tommy shuddered, as she crushed the weary fly.

"Now, unpack your box," she commanded. "I'll have no filthy idols here."

"Please," he protested unhappily. "These things are my own."

The blue eye was still relentless, but the brown one began to cry. Tears ran down her smooth face, and her heavy bosom quaked.

"Tommy! How can you be so mulish? When I'm only trying to take your poor dead mother's place, and me such an invalid."

"I'm sorry," he told her. "I hope your health improves. I'll show you everything."

The worn key hung on a string around his neck. He unlocked the chest, but she found no idols. His clothing she took to be laundered, lifting each piece gingerly with two fingers as if it had been steeped in corruption. She sniffed at a fragrant packet of dried herbs, and seized it to be burned.

Finally she bent to peer at the remaining odds and ends the brushes and paints his mother had given him when she left him with the monks, a few splotched watercolors he had tried to make of the monastery and the mountains and his village friends, the broken watch the mountaineers had found beside his father's body, a thick painted cylinder.

"That?" She pointed at his picture of a shy brown child. "Who's that nigger girl?"

"Mira Bai was not a Negro." He covered the picture quickly with another, to hide it from that cold blue eye. "She lived in my own village. She was my teacher's niece.

THE COLD GREEN EYE

We used to study together. But her legs were withered and she was never strong. Last year before the rains were ended the wheel turned for her."

"What wheel?" Aunt Agatha sniffed. "Do you mean she's dead?"

"The soul never dies," Tommy answered firmly. "It always returns in a new body, until it escapes to nirvana. Mira Bai has a stronger body now, because she was good. I don't know where she is—maybe here in Kansas! Someday I'll find her, with the science of Rishabha."

"You poor little fool!" Aunt Agatha stirred his small treasures with the swatter handle, and jabbed at the painted cylinder. "Now what's that contraption?"

"Just-a book."

Very carefully, he slipped it out of the round wooden case and unrolled a little of the long parchment strip. It was very old, yellowed and cracked and faded. The mild brown eye squinted in a puzzled way at the dim strange characters. He wondered how much the blue one saw.

"That filthy scribbling? That's no book."

"It is older than printing," he told her. "It is written with the secret wisdom of the Thirtankara Rishabha. It tells how souls may be guarded through their transmigrations and helped upward toward nirvana."

"Heathen lies!" She reached for it angrily. "I ought to burn it."

"No!" He hugged it in his skinny arms. "Please don't! Because it is so powerful. I need it to aid my father and mother in their new lives. I need it to know Mira Bai when I find her again. I think you need it too, Aunt Agatha, to purge your own soul of the eight kinds of karma—"

"What?" The brown eye widened with shock and the blue one narrowed angrily. "I'll have you know that I'm a decent Christian, safe in the heart of God. Now put the filthy scrawl away and wash yourself up. I guess that's something your verminous monks forgot to teach you."

"Please! The holy men are very clean."

"Now you're trying to aggravate me, poorly as I am." She snuffled and her brown eye wept again. "I'm going to teach you a respectable religion, and I don't need any nasty

foreign scribblings to help me whip the sin out of you!"

She was very sweet about it, and she always cried when she was forced to beat him. The exertion was really too much for her poor heart. She did it only for dear Lizzie's sake, and he ought to realize that the punishment was far more painful to her than to him.

She tried to teach him her religion, but Tommy clung to the wisdom of the kind old monks of Mahavira. She tried to wash the East out of him with pounds of harsh yellow soap, until his sunburnt skin had faded to a sickly vellow pallor. She prayed and cried over him for endless hours, while he knelt with numb bare knees on cruel bare floors. She threatened to whip him again, and she did.

She whipped him when he covered up the big sheets of sticky yellow fly paper she put in his room, whipped him when he poured out the shallow dishes of fly poison she kept on the landing. But she seemed too much shaken to strike him, on the sultry afternoon when she found him carefully liberating the flies in the screen wire trap outside the kitchen doora Kansas summer breeds flies enough.

"You sinful little infidel!"

Her nerves were all on edge. She had to sit down on the doorstep, resting her poor heart and gasping with her asthma. But her fat pink fingers seemed strong enough, when she caught him by the ear.

She called the hired man to bring a torch dipped in gasoline, and held him so that he had to watch while she burned the flies that were left in the trap. He stood shiver-

ing with his own pain, quiet and pale and ill.

"Now come along!" She led him up the stairs, by his twisted ear. "I'll teach you whether flies have souls." Her voice was like a saw when it strikes a nail. "I'm going to lock you up tonight without your supper, but I'll see you in the morning."

She shoved him into the stifling attic room. It was bare and narrow as the monastery cells, with only his hard little cot and his precious teakwood chest. His tears blurred the painted carving on the chest-it was the blue snake of the deva Parshva. who had reached nirvana.

She held him by the twisted ear.

THE COLD GREEN EYE

"Believe me, Thomas, this hurts me terribly." She snuffled and cleared her throat. "I want you to pray tonight. Beg God to clean up your dirty little soul."

She gave his ear another twist.

"When I come back in the morning, I want you to get down on your bended knees with me and confess to Him that all this rot about flies with souls is only a wicked lie."

"But it's the truth!" He caught his breath, trying not to whimper. "Please, Aunt Agatha, let me read you part of the sacred book—"

"Sacred?" She shook him by the ear. "You filthy little blasphemer! I'm going down now to pray for you. But when I come back in the morning I'm going to open up your box and take away that heathen writing—I declare it's what gives you all these wicked notions. I'm going to burn it in the kitchen stove."

"But—Aunt Agathal" He shivered with a sharper pain. "Without the secret book, I can't guide anybody toward nirvana. I can't help my father and mother, struggling under their load of karma. I won't even know little Mira Bai, if I should ever find her."

"I'll teach you what you need to know." She let go his tingling ear, to box it sharply. "We'll burn that book in the morning. You'll forget every word it says, or stay in this room till you starve."

She locked the door on him and waddled down the stairs again, weeping for his soul and wheezing with her asthma. She had a good nip of whisky for her heart, and filled herself a nice plate of cold roast chicken and potato salad before she went up to her own room to pray.

For a long time Tommy sat alone on the edge of the hard lumpy cot with his throbbing head in his hands. Crying was no use; old Chandra Sha had taught him that. He longed for his father and mother, those tanned happy wanderers he could barely remember, but the wheel had turned for them.

Nothing was left, except the sacred parchment. When the ringing in his punished ear had stopped, he bent to unlock the teakwood chest. He unrolled the brittle yellow scroll.

His pale lips moved silently, following the faded black-andscarlet characters.

The book, he felt, was more precious than all Kansas. He had to save it, to help his reborn parents, and to find Mira Bai, and even to aid his aunt—her poor soul was laden, surely, with a perilous burden of karma, but perhaps the science of the book could find her a more fortunate rebirth.

Trembling and afraid, he began to do what the holy men

had taught him.

It was the hired girl, next morning, who came up to unlock his room. She was looking for his Aunt Agatha.

"I can't understand it." Her twangy Kansas voice was half hysterical. "I didn't hear a thing, all night long. The outside doors are locked up tight. None of her things are missing. But I've looked high and low. Your sweet little Auntie isn't anywhere."

The boy looked thin and pale and drawn. His dark eyes were rimmed with grime, hollowed for want of sleep. He was rolling up the long strip of brittle yellow parchment. Very carefully, he replaced it in the painted case.

"I think you wouldn't know her now." His shy voice was sad. "Because the wheel of her life has turned again. She has entered another cycle."

"I don't know what you mean." The startled girl stared at him. "But I'm afraid something awful has happened to your poor old Auntic. I'm going to phone the sheriff."

Tommy was downstairs in the gloomy front room when the sheriff came, standing in a chair drawn up against the mantle.

"Now don't you worry, little man," the sheriff boomed. "I'm come out to old Miz Grimm. Just tell me when you seen her last."

"Here she is, right now," Tommy whispered faintly. "But if you haven't been instructed in the science of transmigration, I don't think you'll know her."

He was leaning over one of the hig vellow sheets of adhesive fly paper that Aunt Agatha like to leave spread at night to eatch flies while she slept. He was trying to help a large, blue fly that was hopelessly tangled and droning in its last feeble fury.

THE COLD GREEN EYE

"Pore little young-un!" The sheriff clucked sympathetically. "His aunt told me he was full of funny heathen notions!" He didn't even glance at the dying fly. But Tommy hadn't found it hard to recognize. Its right eye was a furious, greenish blue, the left was a tiny bead of wet brown glass.

GUINEVERE FOR EVERYBODY

The wonderful box in this story is a human cell in a tissue culture bank. The principal victim of the Pandora Effect is none of the human characters, least of all Pip Chimberley, but rather the surprised computer named Athena Sue.

"Guinevere for Everybody" was inspired by an article in a picture magazine. It promised immortality, here and now. When I read the article, the recipe seemed too simple—you just preserve a few cells of scar tissue. After a few more years of progress, the article promised, biologists will know how to grow cultured tissue cells into identical copies of the donor. They can "clone people."

The wonders of the human cell, opened up in this way, appeared to me even more alarming than the wonders of the unlocked atom. The proposal looked so plausible that I set out to satirize it. The logical heroine was a computing machine, programmed to use the cheapest possible materials for the mass production of the most widely wanted product. So far as Athena Sue could see, that product was Guinevere.

The girl stood chained in the vending machine.

"Hi, there!" Her plaintive hail whispered wistfully back from the empty corners of the gloomy waiting room. "Won't somebody buy me?"

Most of the sleepy passengers trailing through the warm desert night from the Kansas City jet gaped at her and hurried on uneasily, as if she had been a tigress inadequately caged, but Pip Chimberley stopped, jolted wide awake.

"Hullo, mister." The girl smiled at him, with disturbingly huge blue eyes. The chains tinkled as her hands came up hopefully, to fluff and smooth her copper-blond hair. Her long tan body flowed into a pose that filled her sheer chem-

istic halter to the bursting point. "You like me, huh?"

Chimberley gulped. He was an angular young man, with a meat-cleaver nose, an undernourished mouse-colored mustache, and three degrees in cybernetic engineering. His brown, murky eyes fled from the girl and fluttered back again, fascinated.

"Won't you buy me?" She caressed him with her coaxing drawl. "You'd never miss the change, and I know you'd like me. I like you."

He caught his breath, with a strangled sound.

"No!" He was hoarse with incipient panic. "I'm not a customer. My interest is—uh—professional."

He sidled hastily away from the shallow display space where she stood framed in light, and resolutely shifted his eyes from her to the vending machine. He knew machines, and it was lovely to him, with the seductive sweep of its streamlined contours and the exciting gleam of its blinding red enamel. He backed away, looking raptly up at the glazing allure of the 3-D sign:

GUINEVERE THE VITAL APPLIANCE! NOT A ROBOT—WHAT IS SHE?

The glowing letters exploded into galaxies of dancing light, that condensed again into words of fire. Guinevere, the ultimate appliance, was patented and guaranteed by Solar Chemistics, Inc. Her exquisite body had been manufactured by automatic machinery, untouched by human beings. Educated by psionic processes, she was warranted sweet-tempered and quarrel-free. Her special introductory price, for a strictly limited time, was only four ninety-five.

"Whatever your profession is, I'm very sure you need me." She was leaning out of the narrow display space, and her low voice followed him melodiously. "I have everything, for everybody."

Chimberley turned uncertainly back.

"That might be," he muttered reluctantly. "But all I want is a little information. You see, I'm a cybernetics engineer." He told her his name.

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"I'm Guinevere." She smiled, with a flash of precise white teeth. "Model 1, Serial Number 1997-A-456. I'd be delighted to help you, but I am afraid you'll have to pay for me first. You do want me, don't you?"

Chimberley's long equine countenance turned the color of a wet brick. The sorry truth was, he had never whole-heartedly wanted any woman. His best friends were digital computers; human beings had always bored him. He couldn't understand the sudden pounding in his ears, or the way his knobby fists had clenched.

"I'm here on business," he said stiffly. "That's why I stopped. You see, I'm a trouble-shooter for General Cyber-

netics."

"A shooter?" Psionic educational processes evidently had their limits, but the puzzled quirk of her eyebrows was

somehow still entrancing. "What's a shooter?"

"My company builds the managerial computers that are replacing human management in most of the big corporations," he informed her patiently. "I'm supposed to keep them going. Actually, the machines are designed to adjust and repair themselves. They never really go wrong. The usual trouble is that people just don't try to understand them."

He snapped his bony fingers at human stupidity.

"Anyhow, when I got back to my hotel tonight, there was this wire from Schenectady. First I'd heard about any trouble out here in the sun country. I still don't get it." He blinked at her hopefully. "Maybe you can tell me what's going on."

"Perhaps I can," she agreed sweetly. "When I'm paid for."

"You're the trouble, yourself," he snapped back accusingly. "That's what I gather, though the wire was a little too concise—our own management is mechanized, of course, and sometimes it fails to make sufficient allowances for the limitations of the human employee."

"But I'm no trouble," she protested gaily. "Just try me."
A cold sweat burst into the palms of his hands. Spots

A cold sweat burst into the palms of his hands. Spots danced in front of his eyes. He scowled bleakly past her at the enormous vending machine, trying angrily to insulate himself from all her disturbing effects.

"Just four hours since I got the wire. Drop everything. Fly out here to trouble-shoot Athena Sue—she's the installation

we made to run Solar Chemistics. I barely caught the jet, and I just got here. Now I've got to find out what the score is."

"Score?" She frowned charmingly. "Is there a game?"

He shrugged impatiently.

"Seems the directors of Solar Chemistics are unhappy because Athena Sue is manufacturing and merchandising human beings. They're threatening to throw out our managerial system, unless we discover and repair the damage at once."

He glowered at the shackled girl.

"But the wire failed to make it clear why the directors object. Athena Sue was set to seek the greatest possible financial return from the processing and sale of solar synthetics, so it couldn't very well be a matter of profits. There's apparently no question of any legal difficulty. I can't see anything for the big wheels to clash their gears about."

Guinevere was rearranging her flame-tinted hair, smiling

with a radiance he couldn't entirely ignore.

"Matter of fact, the whole project looks pretty wonderful to me." He grinned at her and the beautiful vending machine with a momentary admiration. "Something human management would never have had the brains or the vision to accomplish. It took one of our Athena-type computers to see the possibility, and to tackle all the technical and merchandising problems that must have stood in the way of making it a commercial reality."

"Then you do like me?"

"The directors don't, evidently." He tried not to see her hurt expression. "I can't understand why, but the first part of my job here will be to find the reason. If you can help me—"

He paused expectantly.

"I'm only four ninety-five," Guinevere reminded him. "You

put the money right here in this slot-"

"I don't want you," he interrupted harshly. "Just the background facts about you. To begin with—just what's the difference between a vital appliance and an ordinary human being?"

He tried not to hear her muffled sob.

"What's the plant investment?" He raised his voice, and ticked the questions off on his skinny fingers. "What's the

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production rate? The profit margin? Under what circumstances was the manufacture of—uh—vital appliances first considered by Athena Sue? When were you put on the market? What sort of consumer acceptance are you getting now? Or don't you know?"

Guinevere nodded brightly.

"But can't we go somewhere else to talk about it?" She blinked bravely through her tears. "Your room, maybe?" Chimberley squirmed uncomfortably.

"If you don't take me," she added innocently, "I can't tell

you anything."

He stalked away, angry at himself for the way his knees trembled. He could probably find out all he had to know from the memory tapes of the computer, after he got out to the plant. After all, she was only an interesting product of chemistic engineering.

A stout, pink-skinned businessman stepped up to the vending machine, as the wailing urchin was dragged away. He unburdened himself with a thick briefcase and a furled umbrella, removed his glasses, and leaned deliberately to peer at Guinevere with bulging, putty-colored eyes.

"Slavery!" He straightened indignantly. "My dear young lady, you do need help." He replaced his glasses, fished in his pockets, and offered her a business card. "As you see, I'm an attorney. If you have been forced into any kind of involuntary servitude, my firm can certainly secure your release"

"But I'm not a slave," Guinevere said. "Our management has secured an informal opinion from the attorney general's office to the effect that we aren't human beings—not within the meaning of the law. We're only chattels."

"Eh?" He bent unbelievingly to pinch her golden arm. "Wha-"

"Alfred!"

He shuddered when he heard that penetrating cry, and snatched his fingers away from Guinevere as if she had become abruptly incandescent.

"Oh!" She shrank back into her narrow prison, rubbing at her bruised arm. "Please don't touch me until I'm paid for."

"Shhh!" Apprehensively, his bulging eyes were following a

withered little squirrel-faced woman in a black-veiled hat, who came bustling indignantly from the direction of the ladies' room, "My-an-encumbrance."

"Alfred, whatever are you up to now?"

"Nothing, my dear. Nothing at all." He stooped hastily to recover his briefcase and umbrella. "But it must be time to see about our flight—"

"So! Shopping for one of them synthetic housekeepers?" She snatched the umbrella and flourished it high. "Well, I

won't have 'em in any place of minel"

"Martha, darling-"

"I'll Martha-darling you!"

He ducked away.

"And you!" She jabbed savagely at Guinevere. "You synthetic whatever-you-are, I'll teach you to carry on with any man of mine!"

"Hey!"

Chimberley hadn't planned to interfere, but when he saw Guinevere gasp and flinch, an unconsidered impulse moved him to brush aside the stabbing umbrella. The seething woman turned on him.

"You sniveling shrimp!" she hissed at him. "Buy her your-self—and see what you get!"

She scuttled away in pursuit of Alfred.

"Oh, thank you, Pip!" Guinevere's voice was muted with pain, and he saw the long red scratch across her tawny shoulder. "I guess you do like me!"

To his own surprise, Chimberley was digging for his bill-fold. He looked around self-consciously. Martha was towing Alfred past the deserted ticket windows, and an age-numbed janitor was mopping the floor, but otherwise the waiting room was empty. He fed five dollars into the slot, and waited thriftily for his five cents change.

A gong chimed softly, somewhere inside the vending machine. Something whirred. The shackles fell from Guinevere's wrists and flicked out of sight.

SOLD OUT! a 3-D sign blazed behind her. BUY YOURS TOMORROW!

"Darling!" She had her arms around him before he recovered his nickel. "I thought you'd never take me!"

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He tried to evade her kiss, but he was suddenly paralyzed. A hot tingling swept him, and the scent of her perfume made a veil of fire around him.

"Hold on!" He pushed at her weakly, trying to remind himself that she was only an appliance. "I've got work to do, remember. And there's some information you've agreed to

supply."

"Certainly, darling." Obediently, she disengaged herself. "But before we leave, won't you buy my accessory kit?" A singsong cadence came into her voice. "With fresh undies and a makeup set and gay chemistic nightwear, packed in a sturdy chemyl case, it's all complete for only nineteen ninety-five."

"Not so fast! That wasn't in the deal-"

He checked himself, with a grin of admiration for what was evidently an astutely integrated commercial operation. No screws loose so far in Athena Sue!

"Okay," he told Guinevere. "If you'll answer all my questions."

"I'm all yours, darling!" She reached for his twenty. "With everything I know."

She fed the twenty into the accessory slot. The machine chimed and whirred and coughed out a not-so-very-sturdy chemistic case. Guinevere picked it up and hugged him gratefully, while he waited for the clink of his nickel.

"Never mind the mugging, please!" He felt her cringe away from him, and tried to soften his voice. "I mean, we've no time to waste. I want to start checking over Athena Sue as soon as I can get out to the plant. We'll take a taxi, and talk on the way."

"Very well, Pip, dear." She nodded meekly. "But before we start, couldn't I have something to eat? "I've been standing here since four o'clock yesterday, and I'm simply famished."

With a grimace of annoyance at the delay, he took her into the terminal coffee shop. It was almost empty. Two elderly virgins glared at Guinevere, muttered together, and marched out piously. Two sailors tittered. The lone counterman looked frostily at Chimberley, attempting to ignore Guinevere.

Chimberley studied the menu unhappily and ordered two

T-bones, resolving to put them on his expense account. The counterman was fresh out of steaks, and not visibly sorry. It was chemburgers or nothing.

"Chemburgers!" Guinevere clapped her hands. "They're made by Solar Chemistics, out of golden sunlight and pure sea water. They're absolutely tops, and everybody loves 'em!"

"Two chemburgers," Chimberley said, "and don't let 'em

burn."

He took Guinevere back to a secluded booth.

"Now let's get started," he said. "I want the whole situation. Tell me everything about you."

"I'm a vital appliance. Just like all the others."
"So I want to know all about vital appliances."

"Some things I don't know." She frowned fetchingly. "Please, Pip, may I have a glass of water? I've been waiting there all night, and I'm simply parched."

The booth was outside the counterman's domain. He set out the water grudgingly, and Chimberley carried it back to Guinevere.

"Now what don't you know?"

"Our trade secrets." She smiled mysteriously. "Solar Chemistics is the daring pioneer in this exciting new field of redesigned vital organisms. Our mechanized management is much too clever to give away the unique know-how that makes us available to everybody. For that reason, deliberate gaps were left in our psionic education."

Chimberley blinked at her shining innocence, suspecting

that he had been had.

"Anyhow," he told her uneasily, "tell me what you do know. What started the company to making—uh—redesigned vital organisms?"

"The Miss Chemistics tape."

"Now I think we're getting somewhere." He leaned quickly

across the narrow table. "Who's Miss Chemistics?"

"The world's most wanted woman." Guinevere sipped her water gracefully. "She won a prize contest that was planned to pick out the woman that every man wanted. A stupid affair, organized by the old human management before the computer was put in. There was an entry blank in every package of our synthetic products. Forty million women entered. The

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winner was a farm girl named Gussie Schlepps before the talent agents picked her up-now she's Guinevere Golden."

"What had she to do with you?"

"We're copies." Guinevere smirked complacently. "Of the world's most wonderful woman."

"How do you copy a woman?"

"No human being could," she said. "It takes too much know-how. But our computer was able to work everything out." She smiled proudly. "Because the prize that Miss Chemistics won was immortality."

"Huh?" He gaped at her untroubled loveliness. "How's

that?"

"A few cells of scar tissue from her body were snipped off and frozen, in our laboratory. Each cell, you know, contains a full set of chromosomes—a complete genetic pattern for the reproduction of the whole body—and the legal department got her permission for the company to keep the cells alive forever and to produce new copies of her whenever suitable processes should be discovered."

"Maybe that's immortality." Chimberley frowned. "But it

doesn't look like much of a prize."

"She was disappointed when they told her what it was." Guinevere nodded calmly. "In fact, she balked. She didn't want anybody cutting her precious body. She was afraid it would hurt, and afraid the scar would show—but she did want the publicity. All the laboratory needed was just a few cells. She finally let a company doctor take them, where the scar wouldn't show. And the publicity paid off. She's a realies actress now, with a million-dollar contract."

"One way to the top." Chimberley grinned. "But what

does she think of vital appliances?"

"She thinks we're wonderful." Guinevere beamed. "You see, she gets a royalty on every copy sold. Besides, her agent

says we're sensational publicity."

"I suppose you are." A reluctant admiration shone through his mud-colored eyes, before he could bring his mind back to business. "But let's get on with it. What about Miss Chemistics tape?"

"The contest closed before our management was mechanized," she said, "while old Matt Skane was still general mana-

ger. But when the computer took over, all the company records were punched on chemistic tapes and filed in its memory banks."

He sat for a moment scowling. His eyes were on Guinevere, but he was reaching in his mind for the tidy rows of crackle-finished cabinets that housed Athena Sue, groping for the feel of her swift responses. The thinking of managerial computers was sometimes a little hard to follow, even for cybernetic engineers—and even when there was no question of any defective circuits.

Guinevere was squirming uncomfortably.

"Is something wrong with my face?"

"Not a thing." He scratched his own chin. "I heard you tell your legal friend, back there at the vending machine, that you aren't a human being within the meaning of the law. What's the difference?"

"The original cells are all human." She dabbed at her eyes with a paper napkin and looked up to face him bravely. "The differences come later, in the production lines. We're attached to mechanical placentas, and grown under hormone control in big vats of chemistic solutions. We're educated as we grow, by psionic impulses transmitted from high-speed training tapes. All of that makes differences, naturally. The biggest one is that we are better."

She frowned thoughtfully.

"Do you think the women are jealous?"

"Could be." Chimberley nodded uncertainly. "I never pretended to understand women. They all seem to have a lot of circuits out of kilter. Give me Athena Sue. Let's get out to the plant—"

Guinevere sniffed.

"Oh, Pip!" she gasped. "Our chemburgers!"

The counterman stood rubbing his hands on a greasy towel, staring at her with a fascinated disapproval. The forgotten chemburgers were smoking on the griddle behind him. Her wail aroused him. He scraped them up and slapped them defiantly on the counter.

Chimberley carried them silently back to Guinevere. He didn't care for chemburgers in any condition, but she con-

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sumed them both in ecstasy, and begged for a piece of

chemberry pie.

"It's awfully good," she told him soulfully. "Made from the most ambrosial synthetics, by our exclusive chemistic processes. Won't you try a piece?"

When they approached a standing cab out in the street,

the driver stiffened with hostility. But he took them.

"Keep her back," he growled. "Outa sight. Mobs smashed

a couple hacks yesterday to get at 'em."

Guinevere sat well back out of sight, crouching close to Chimberley. She said nothing, but he felt her shiver. The cab went fast through empty streets, and once when the tires squealed as it lurched around a corner she caught his hand apprehensively.

"See that, mister?" The driver slowed as they passed a block of charred wreckage. "Used to be one of them mechanized markets, Mob burned it vesterday. Machines inside sell-

ing them. See what I mean?"

Chimberley shook his head. Guinevere's clutching hand felt cold on his. Suddenly he slipped his arm around her. She leaned against him, and whispered fearfully:

"What does he mean?"
"I don't quite know."

The Solar Chemistics plant was ominously black. A few tattered palms straggled along the company fence. A sharp, yeasty scent drifted from the dark sea of solar reaction vats beyond, and blue floodlights washed the scattered islands where enormous bright metal cylinders towered out of intertwining jungles of pipes and automatic valves.

Chimberley sniffed the sour odor, and pride filled his narrow chest. Here was the marvelous body to Athena Sue's intricate brain. It breathed air and drank sea water and fed on sunlight, and gave birth to things as wonderful as Guin-

evere.

The driver stopped at a tall steel gate, and Chimberley got out. The rioters had been there. The palms along the fence were burned down to black stumps. Rocks had smashed gaping black holes in the big 3-D sign on the side of the gray concrete building beyond the fence, and broken

glass grated on the pavement as he walked to the gate. He found the bell, but nothing happened. Nobody moved inside the fence. All those dark miles of solar reactors had been designed to run and maintain themselves, and Athena Sue controlled them. A thousand fluids flowed continuously through a thousand processes to form a thousand new synthetics. Human labor was only in the way.

"Your almighty machinel" the driver jeered behind him.

"Looks like it don't know vou."

He jabbed the bell again, and an unhurried giant with a watchman's clock came out of the building toward the gate. Chimberley passed his company identification card through the barrier, and asked to see somebody in the office.

"Nobody there." The watchman chuckled cheerfully. "Un-

less you count that thinking machine."

"The computer's what I really want to see, if you'll let me in-

"Afraid I couldn't, sir."

"Listen." Chimberley's voice lifted and quivered with frustration. "This is an emergency. I've got to check the computer right away."

"Can't be that emergent." The watchman gave him a sunbronzed grin. "After all the hell yesterday, the directors shut

off the power to stop your gadget."
"But they can't-" Alarm caught him, as if his own brain had been threatened with oxygen starvation. "Without power, her transistors will discharge. She'll-well, die!"

"So what?" The watchman shrugged. "The directors are meeting again in the morning, with our old legal staff, to get

rid of her."

"But I'll have her checked and balanced again by then." he promised desperately. "Just let me in!"

"Sorry, sir. But after all that happened yesterday, they told

me to keep everybody out."

"I see." Chimberley drew a deep breath and tried to hold his temper. "Would you tell me exactly what did happen?"

"If you don't know." The watchman winked impudently at the cab where Guinevere sat waiting. "Your big tin brain had developed those synthetic cuties secretly. It put them on the market vesterday morning. I guess they did look like some-

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thing pretty hot, from a gadget's point of view. The item every man wanted most, at a giveaway price. Your poor old thinking machine will probably never understand why the mobs tried to smash it."

Chimberley bristled. "Call the responsible officials. Now. I

insist."

"Insist away." The brown giant shrugged. "But there aren't any responsible officials, since the computer took over. So what can I do?"

"You might try restraining your insolence," Chimberley snapped. "And give me your name. I intend to report you in the morning."

"Matt Skane," he drawled easily. "Used to be general

manager."

"I see," Chimberley muttered accusingly. "You hate computers!"

"Why not?" He grinned through the bars. "I fought 'em for years, before they got the company. It's tough to admit you're obsolete."

Chimberley stalked back to the cab and told the driver to take him to the Gran Desierto Hotel. The room clerk there gave Guinevere a chilling stare, and failed to find any record of the reservation. Another taxi driver suggested his life would be simpler, and accommodations easier to arrange, if he would ask the police to take her off his hands, but by that time his first annoyed bewilderment was crystalizing into stubborn anger.

"I can't understand people," he told Guinevere. "They aren't like machines. I sometimes wonder how they ever managed to invent anything like Athena Sue. But whatever they do, I don't intend to give you up."

Day had come before he found an expensive room in a shabby little motel, where the sleepy manager demanded his money in advance and asked no questions at all. It was too late to sleep, but he took time for a shower and a shave.

His billfold was getting thin, and it struck him that the auditing machines might balk at some of his expenses on account of Guinevere. Prudently, he caught a bus at the corner. He got off in front of the plant, just before eight o'clock. The

gate across the entrance drive was open now, but an armed guard stepped out to meet him.

"I'm here from General Cybernetics-"

He was digging nervously for his identification card, but the tall guard gestured easily to stop him.

"Mr. Chimberley?"

"I'm Chimberley. And I want to inspect our managerial in-

stallation here, before the directors meet this morning."

"Matt Skane told me you were coming, but I'm afraid you're late." The guard gestured lazily at a row of long cars parked across the drive. "The directors met an hour ago. But come along."

A wave of sickness broke over him as the guard escorted him past an empty reception desk and back into the idle silence of the mechanized administrative section. A sleek, feline brunette, who must have been a close runner-up in the Miss Chemistics contest, sat behind the chrome railing at the dead programming panel, intently brushing crimson lacquer on her talons. She glanced up at him with a spark of interest that instantly died.

"The hot shot from Schenectady," the guard said. "Here to

overhaul the big tin brain."

"Shoulda made it quicker." She flexed her claws, frowning critically at the fresh enamel. "Word just came out of the board room. They're doing away with the brain. High time, too, if anybody wants to know."

"Why?"

"Didn't you see 'em?" She blew on her nails. "Those horrible synthetic monsters it was turning loose everywhere."

He remembered that she must have been a runner-up. "Anyhow," he muttered stubbornly, "I want to check the computer."

With a bored nod, she reached to unlatch the little gate that let him through the railing into the metal-paneled, airconditioned maze that had been the brain of Athena Sue. He stopped between the neat banks of pastel-painted units, saddened by their silence.

The exciting sounds of mechanized thought should have been whispering all around him. Punched cards should have been riffling through the whirring sorters, as Athena Sue re-

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membered. Perforators should have been punching chemistic tape, as she recorded new data. Relays should have been clicking as she reached her quick decisions, and automatic typewriters murmuring with her many voices.

But Athena Sue was dead.

She could be revived, he told himself hopefully. Her permanent memories were all still intact, punched in tough chemistic film. He could set her swift electronic pulse to beating again, through her discharged transistors, if he could find the impossible flaw that had somehow led to her death.

He set to work.

Three hours later he was bent over a high-speed scanner, reading a spool of tape, when a hearty shout startled him.

"Well, Chimberley! Found anything?"

He snatched the spool off the scanner and shrank uneasily back from the muscular giant stalking past the programming desk. It took him a moment to recognize Matt Kane, without the watchman's clock. Clutching the tape, he nodded stiffly.

"Yes." He glanced around him. The billowy brunette and the guard had disappeared. He wet his lips and gulped.

"I-I've found out what happened to the computer."

"So?"

Skane waited, towering over him, a big, red, weather-beaten man with horny hands shaped as if to fit a hammer or the handles of a plow, a clumsy misfit in this new world where machines had replaced both his muscles and his mind. He was obsolete—but dangerous.

"It was sabotaged." Chimberley's knobby fist tightened on the spool of tape, in sweaty defiance.

"How do you know?"

"Here's the whole story." He brandished the chemistic reel. "Somebody programmed Athena Sue to search for a project that would result in her destruction. Being an efficient computer, she did what she was programmed to do. She invented vital appliances, and supplied a correct prediction that the unfavorable consumer reaction to them would completely discredit mechanized equipment. So the saboteur reprogrammed her to ignore the consequences and manufacture Guinevere."

"I see." Skane's bright blue eyes narrowed ominously. "And who was this cunning saboteur?"

Chimberley caught a rasping, uneven breath. "I know that he was somebody who had access to the programming panel at certain times, which are recorded on the input log. So far as I've been able to determine, the only company employee who should have been here at those times was a watchmannamed Matt Skape."

The big man snorted.

"Do you call that evidence?"

"It's good enough for me. With a little further investigation, I think I can uncover enough supporting facts to interest the directors."

Skane shifted abruptly on his feet, and his hard lips twitched. "The directors are gone," he drawled softly. "And there isn't going to be any further investigation. Because we've already gone back to human management. We're junking your big tin brain. I'm the general manager now. And I want that tape."

He reached for the chemistic spool.

"Take it." Chimberley crouched back from his long bronze arm, and ignominiously gave up the tape. "See what good it does you. Maybe I can't prove much of anything without it. But you're in for trouble, anyhow."

Skane grunted contemptuously.

"You can't turn the clock back," Chimberley told him bitterly. "Your competitors won't go back to human management. You'll still have all their computers to fight. They had

you against the wall once, and they will again."

"Don't bet on it." Skane grinned. "Because we've learned a thing or two. We're going to use machines, instead of trying to fight them. We're putting in a new battery of the smaller sort of auxiliary computers—the kind that will let us keep a man at the top. I think we'll do all right, with no further help from you."

Chimberley hastily retreated from the smoldering blue eyes. He felt sick with humiliation. His own future was no serious problem; a good cybernetics engineer could always find an opening. What hurt was the way he had failed Athena Sue.

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But there was Guinevere, waiting in his room.

His narrow shoulders lifted when he thought of her. Most women irked and bored him, with all their fantastic irrationalities and their insufferable stupidities, but Guinevere was different. She was more like Athena Sue, cool and comprehensible, free of all the human flaws that he detested.

He ran from the bus stop back to the seedy motel, and his heart was fluttering when he rapped at the door of their

room.

"Guineverel"

He listened breathlessly. The latch clicked. The door creaked. He heard her husky-throated voice.

"Oh, Pip! I thought you'd never come."

"Guin-"

Shock stopped him, when he saw the woman in the doorway. She was hideous with old age. She felt feebly for him with thin blue claws, peering toward him blindly.

"Pip?" Her voice was somehow Guinevere's. "Isn't it you?"
"Where—" Fright caught his throat. His glance fled into
the empty room beyond, and came back to her stooped and
tottering frame, her wasted, faded face. He saw a dreadful
likeness there, but his mind rejected it. "Where's Guinevere?"

"Darling, don't you even know me?"

"You couldn't be-" He shuddered. "But still-your voice-"

"Yes, dear, I'm yours." Her white head nodded calmly. "The same vital appliance you bought last night. Guinevere Model 1. Serial Number 1997-A-456."

He clutched weakly at the door frame.

"The difference you have just discovered is our rapid obsolescence." A strange pride lifted her gaunt head. "That's something we're not supposed to talk about, but you're an engineer. You can see how essential it is, to insure a continuous replacement demand. A wonderful feature, don't you think, darling?"

He shook his head, with a grimace of pain.

"I suppose I don't look very lovely to you any longer, but that's all right." Her withered smile brightened again. "That's the way the computer planned it. Just take me back to the

vending machine where you bought me. You'll get a generous trade-in allowance, on tomorrow's model."

"Not any more," he muttered hoarsely. "Because our com-

puter's out. Skane's back in, and I don't think he'll be making vital appliances."

"Oh, Pip!" She sank down on the sagging bed, staring up at him with a blind bewilderment. "I'm so sorry for you!"

He sat down beside her, with tears in his murky eyes. For one bitter instant, he hated all computers, and the mobsand Matt Skane as well.

But then he began to get hold of himself.

After all, Athena Sue was not to blame for anything. She had merely been betrayed. Machines were never evil. except when men used them wrongly.

He turned slowly back to Guinevere, and gravely kissed

her shriveled lips.
"I'll make out," he whispered. "And now I've got to call Schenectady."

Here the focus changes. We've been watching a series of reckless individuals prying into their forbidden boxes, but the original myth suggests that we should take a wider view. Freud's death-drive may be an individual instinct, but philosophers of history have believed that human civilizations are doomed to perish like individual men. The "organismic analogy" likens the body politic to the living body, with citizens and social classes in place of cells and special tissues. That likeness is probably deceptive, yet the prevalence of folly is wide enough to suggest that the Pandora Effect may be at work on the whole human race.

In this story, a man of good will has attempted to undo Pandora's original error. He had invented the perfect machines and programmed them to cure every human misfortune.

Somebody has called the story a "dystopia," but I wasn't trying to write anything that academic. I simply wanted to tell what happens to a family of ordinary people in an ordinary town when the humanoids come to set up their cold utopia. An optimist by nature, I even asssumed at first that men could somehow escape their suffocating care, but somehow the humanoids defeated me. Like all Pandora's creatures, they had ideas of their own about returning to the box.

Ι

Underhill was walking home from the office, because his wife had the car, the afternoon he first met the new mechanicals. His feet were following his usual diagonal path across a weedy vacant block—his wife usually had the car—and his preoccupied mind was rejecting various impossible ways

to meet his notes at the Two Rivers Bank, when a new wall

stopped him.

The wall wasn't any common brick or stone, but something sleek and bright and strange. Underhill stared up at a long new building. He felt vaguely annoyed and surprised at this glittering obstruction—it certainly hadn't been here last week.

Then he saw the thing in the window.

The window itself wasn't any ordinary glass. The wide, dustless panel was completely transparent, so that only the glowing letters fastened to it showed that it was there at all. The letters made a severe, modernistic sign:

Two Rivers Agency
HUMANOID INSTITUTE
The Perfect Mechanicals
"To Serve and Obey,
And GUARD MEN FROM HARM."

His dim annoyance sharpened, because Underhill was in the mechanicals business himself. Times were already hard enough; mechanicals were a drug on the market. Androids, mechanoids, electronoids, automatoids, and ordinary robots. Unfortunately, few of them did all the salesmen promised, and the Two Rivers market was already sadly oversold.

Underhill sold androids—when he could. His next consignment was due tomorrow, and he didn't quite know how to meet the bill.

Frowning, he paused to stare at the thing behind that invisible window. He had never seen a humanoid. Like any mechanical not at work, it stood absolutely motionless. Smaller and slimmer than a man, it was nude, neuter as a doll. A shining black, its sleek silicone skin had a changing sheen of bronze and metallic blue. Its graceful oval face wore a fixed look of alert and slightly surprised solicitude. Altogether, it was the most beautiful mechanical he had ever seen.

Too small, of course, for much practical utility. He murmured to himself a reassuring quotation from the *Androids Salesman*: "Androids are big—because the makers refuse to sacrifice power, essential functions, or dependability. Androids are your biggest buy!"

The transparent door slid open as he turned toward it, and he walked into the haughty opulence of the new display room to convince himself that these streamlined items were just another flashy effort to catch the woman shopper.

He inspected the glittering lay-out shrewdly, and his breezy optimism faded. He had never heard of the Humanoid Institute, but the invading firm obviously had big money

and big-time merchandising know-how.

He looked around for a salesman, but it was another mechanical that came gliding silently to meet him. A twin of the one in the window, it moved with a quick, surprising grace. Bronze and blue lights flowed over its lustrous blackness, and a yellow name-plate flashed from its naked breast:

HUMANOID Serial No. 81-H-B-27 The Perfect Mechanical "To Serve and Obey And GUARD MEN FROM HARM."

Curiously, it had no lenses. The eyes in its bald oval head were steel-colored, blindly staring. Yet it stopped a few feet in front of him, as if it could see anyhow, and it spoke to him with a high, melodious voice:

"At your service, Mr. Underhill."

The use of his name startled him, for not even the androids could tell one man from another. But this was just a clever merchandising stunt, of course, not too difficult in a town the size of Two Rivers. The salesman must be some local man, prompting the mechanical from behind the partition. Underhill erased his momentary astonishment, and said loudly:

"May I see your salesman, please?"

"We employ no human salesmen, sir," its soft silvery voice replied instantly. "The Humanoid Institute exists to serve mankind; we require no human service. We ourselves can supply any information you desire, sir, and accept your order for immediate humanoid service."

Underhill peered at it dazedly. No mechanicals were competent even to recharge their own batteries and reset their own relays, much less to operate their own branch offices.

The blind eyes stared blankly back, as he looked uneasily around for any booth or curtain that might conceal the salesman.

Meanwhile, the sweet thin voice resumed persuasively:

"May we come out to your home for a free trial demonstration, sir? We are anxious to introduce our service on your planet, because we have been successful in eliminating human unhappiness on so many others. You will find us far superior to the old electronic mechanicals in use here."

Underhill stepped back uneasily. He reluctantly abandoned his search for the hidden salesman, shaken by the idea of any mechanicals promoting themselves. That would upset the

whole industry.

"At least you must take some advertising matter, sir." Moving with a somehow appalling graceful deftness, the small black mechanical brought him an illustrated booklet from a table by the wall. To cover his confused and increasing alarm, he thumbed through the glossy pages.

In a series of richly colored before-and-after pictures, a chesty blond girl was stooping over a kitchen stove, and then relaxing in a daring negligee while a little black mechanical knelt to serve her something. She was wearily hammering a typewriter, and then lying on an ocean beach, in a revealing sun suit, while another mechanical did the typing. She was toiling at some huge industrial machine, and then dancing in the arms of a golden-haired youth, while a black humanoid ran the machine.

Underhill sighed wistfully. The android company didn't supply such fetching sales material. Women would find this booklet irresistible, and they selected 86% of all mechanicals sold. Yes, the competition was going to be bitter.

"Take it home, sir," the sweet voice urged him. "Show it to your wife. There is a free trial demonstration order blank on the last page. You will notice that we require no payment down."

He turned numbly, and the door slid open for him. Retreating dazedly, he discovered the booklet still in his hand. He crumpled it furiously and flung it down. The small black thing picked it up tidily, and the insistent silver voice rang after him:

"We shall call at your office tomorrow, Mr. Underhill, and send a demonstration unit to your home. It is time to discuss the liquidation of your business, because the electronic mechanicals you have been selling cannot compete with us. And we shall offer your wife a free trial demonstration."

Underhill didn't attempt to reply, because he couldn't trust his voice. He stalked blindly down the new sidewalk to the corner, and paused there to collect himself. Out of his startled and confused impressions, one clear fact emerged-things

looked black for the agency.

Bleakly, he stared back at the haughty splendor of the new building. It wasn't honest brick or stone; that invisible window wasn't glass: and he was quite sure the foundation for it hadn't even been staked out, the last time Aurora had the car.

As he walked on around the block, the new sidewalk took him near the rear entrance. A truck was backed up to it, and several slim black mechanicals were silently busy, unloading huge metal crates.

He paused to look at one of the crates. It was labeled for interstellar shipment. The stencils showed that it had come from the Humanoid Institute, on Wing IV. He failed to recall any planet of that designation; the outfit must be big.

Dimly, inside the gloom of the warehouse beyond the trucks. he could see black mechanicals opening the crates. A lid came up, revealing dark, rigid bodies, closely packed. One by one they came to life. They climbed out of the crate and sprang gracefully to the floor. Shining black, glinting with bronze and blue, they were all identical.

One of them came out past the truck to the sidewalk. staring toward him with blind steel eyes. Its high silver voice spoke melodiously:

"At your service, Mr. Underhill."

He fled. When his name was promptly called by a courteous mechanical, just out of the crate in which it had been imported from a remote and unknown planet, he found the experience hard to take.

Two blocks beyond, the sign of a bar caught his eye. He took his dismay inside. He had made it a business rule not to drink before dinner, and Aurora didn't like for him to

drink at all; but these new mechanicals, he felt, had made the day exceptional.

Unfortunately, however, alcohol failed to brighten the brief visible future of the agency. When he emerged after an hour, he looked wistfully back in hope that bright new building might have vanished as abruptly as it came. It hadn't. He shook his head dejectedly, turning uncertainly homeward.

Fresh air had cleared his head somewhat before he arrived at the neat white bungalow in the outskirts of the town, but it failed to solve his business problems. He also realized uneasily that he would be late for dinner.

Dinner, however, had been delayed. His son Frank, a freckled ten-year-old, was still kicking a football on the quiet street in front of the house. Little Gay, who was tow-haired and adorable and eleven, came running across the lawn and down the sidewalk to meet him.

"Father, guess what!" Gay was going to be a great musician someday, and no doubt properly dignified, but she was pink and breathless with excitement now. She let him swing her high off the sidewalk, and she wasn't critical of the bar-aroma on his breath. He couldn't guess, and she informed him eagerly:

"Mother's got a new lodger!"

II

Underhill had foreseen a painful inquisition, because Aurora was worried about the notes at the bank and the bill for the new consignment and the money for little Gay's lessons.

The new lodger, however, saved him from that. With an alarming crashing of crockery, the household android was setting dinner on the table, but the little house was empty. He found Aurora in the back yard, burdened with sheets and towels for the guest.

Aurora, when he married her, had been as utterly adorable as now her little daughter was. She might have remained so, he felt, if the agency had been a little more successful. While the pressure of slow failure was gradually crumbling

his own assurance, however, small hardships had turned her

a little too aggressive.

Of course he loved her still. Her red hair was still alluring, but thwarted ambitions had sharpened her character and sometimes her voice. Though they had never quarreled, really, there had been little differences.

There was the apartment over the garage—built for human servants they had never been able to afford. It was too small and shabby to attract any responsible tenant, and Underhill wanted to leave it empty. It hurt his pride to see her making beds and cleaning floors for strangers.

Aurora had rented it before, however, when she wanted money to pay for Gay's music lessons, or when some colorful unfortunate touched her sympathy, and it seemed to Underhill that her lodgers had all turned out to be thieves and

vandals.

She turned back to meet him, now, with the clean linen in her arms.

"Dear, it's no use objecting." Her voice was quite determined. "Mr. Sledge is the most wonderful old fellow, and he's going to stay just as long as he wants."

"That's all right, darling." He never liked to bicker, and he was thinking of his troubles at the agency. "I'm afraid we'll

need the money. Just make him pay in advance."

"But he can't!" Her voice throbbed with sympathetic warmth. "Not yet. He says he'll have royalties coming in from his inventions. He can pay in a few days."

Underhill shrugged; he had heard that before.

"Mr. Sledge is different, dear," she insisted. "He's a traveler and a scientist. Here in this dull little town, we don't see many interesting people."

"You've picked up some remarkable types."

"Don't be unkind, dear," she chided him gently. "You haven't met him yet. You don't know how wonderful he is." She hesitated. "Have you a ten, dear?"

"What for?"

"Mr. Sledge is ill." Her voice turned urgent. "I saw him fall on the street, downtown. The police were going to send him to the city hospital, but he didn't want to go. He looked so noble and sweet and grand. I told them I would take

him. I got him in the car and took him to old Dr. Winters. He has this heart condition, and he needs the money for medicine."

Reasonably, Underhill inquired, "Why doesn't he want to go to the hospital?"

"He has work to do," she said. "Important scientific work—and he's so wonderful and tragic. Please, dear, have you a ten?"

Underhill thought of many things to say. These new mechanicals promised to multiply his troubles. It was foolish to take in an invalid vagrant, who could have had free care at the city hospital. Aurora's tenants always tried to pay their rent with promises, and generally wrecked the apartment and looted the neighborhood before they left.

But he said none of those things. He had learned to compromise. Silently he found two fives in his thin pocketbook and put them into her hand. She smiled and kissed him impulsively—he barely remembered to hold his breath in time.

Her figure was still good, by dint of periodic dieting. He was proud of her shining red hair. A sudden surge of affection brought tears to his eyes, and he wondered what would happen to her and the children if the agency failed.

"Thank you, dear!" she whispered. "I'll have him come for dinner, if he feels able. You can meet him then. I hope you don't mind dinner being late."

He didn't mind tonight. Moved to a sudden impulse of domesticity, he got hammer and nails from his workshop in the basement and repaired the sagging screen on the kitchen door with a neat diagonal brace.

He enjoyed working with his hands. His boyhood dream had been to be a builder of fission power plants. He had even studied engineering—before he married Aurora and had to take over the ailing mechanicals agency from her indolent and alcoholic father. He was whistling happily by the time the little task was done.

When he went back through the kitchen to put up his tools, he found the household android busy clearing the untouched dinner away from the table—the androids were good enough at strictly routine tasks, but they could never learn to cope with human unpredictability.

"Stop, stop!" Slowly repeated, in the proper pitch and rhythm, his command made it halt; then he said carefully, "Set—table: set—table."

Obediently, the gigantic thing came shuffling back with the stack of plates. He was suddenly struck with the difference between it and those new humanoids. He sighed wearily. Things looked black for the agency.

Aurora brought her new lodger in through the kitchen door. Underhill nodded to himself. This gaunt stranger, with his dark shaggy hair, emaciated face, and threadbare garb, looked to be just the sort of colorful, dramatic vagabond that always touched Aurora's heart. She introduced them, and they sat down to wait in the front room while she went to call the children.

The old rogue didn't look very sick, to Underhill. Perhaps his wide shoulders had a tired stoop, but his spare, tall figure was still commanding. The skin was seamed and pale, over his rawboned, cragged face, but his deep-set eyes still had a burning vitality.

His hands held Underhill's attention. Immense hands, they hung a little forward on long bony arms in perpetual readiness. Gnarled and scarred, darkly tanned, with the small hairs on the back bleached to a golden color, they told their own epic of varied adventure, of battle perhaps, and possibly even of toil. They had been very useful hands.

"I'm very grateful to your wife, Mr. Underhill." His voice was a deep-throated rumble, and he had a wistful smile, oddly boyish for a man so evidently old. "She rescued me from an unpleasant predicament. I'll see that she is well paid."

Just another vivid vagabond, Underhill decided, talking his way through life with plausible inventions. He had a little private game he played with Aurora's tenants—he just remembered what they said, counting one point for every impossibility. Mr. Sledge, he thought, would give him an excellent score.

"Where are you from?" he asked conversationally.

Sledge hesitated for an instant before he answered, and that was unusual-most of Aurora's tenants had been exceedingly glib.

"Wing IV." The gaunt old man spoke with a solemn re-

luctance, as if he should have liked to say something else. "All my early life was spent there, but I left the planet nearly

fifty years ago. I've been traveling, ever since."

Startled, Underhill peered at him sharply. Wing IV, he remembered, was the home planet of those sleek new mechanicals. This old vagabond looked too seedy and impecunious to be connected with the Humanoid Institute. His brief suspicion faded. Frowning, he said casually:

"Wing IV must be rather distant?"

The old rogue hesitated again, and then said gravely:

"One hundred and nine light-years, Mr. Underhill."

That made the first point, but Underhill concealed his satisfaction. The new space liners were pretty fast, but the velocity of light was still an absolute limit. Casually, he played for another point:

"My wife says you're a scientist, Mr. Sledge?"

"Yes."

The old rascal's reticence was unusual. Most of Aurora's tenants required very little prompting. Underhill tried again, in a breezy conversational tone:

"Used to be an engineer myself, until I dropped it to go into mechanicals." The old vagabond straightened, and Underhill paused hopefully. But he said nothing, and Underhill went on: "Fission power-plant design and operation. What's your specialty, Mr. Sledge?"

The old man gave him a long, troubled look, with those

brooding, hollowed eyes, and then said slowly:

"Your wife has been kind to me, Mr. Underhill, when I was in desperate need. I think you are entitled to the truth, but I must ask you to keep it to yourself. I am engaged on a very important research problem, which must be finished secretly."

"I'm sorry." Suddenly ashamed of his cynical little game, Underhill spoke apologetically. "Forget it."

But the old man said deliberately:

"My field is rhodomagnetics."

"Eh?" Underhill didn't like to confess ignorance, but he had never heard of that. "I've been out of the game for fifteen years," he explained. "I'm afraid I haven't kept up."

The old man smiled again, faintly.

"The science was unknown here until I arrived, a few days ago," he said. "I was able to apply for basic patents. As soon as the royalties start coming in, I'll be wealthy again."

Underhill had heard that before. The old rogue's solemn reluctance had been very impressive, but he remembered that most of Aurora's tenants had been very plausible gentry.

"So?" Underhill was staring again, somehow fascinated by those gnarled and scarred and strangely able hands. "What. exactly, is rhodomagnetics?"

He listened to the old man's careful, deliberate answer, and started his little game again. Most of Aurora's tenants had told some pretty wild tales, but he had never heard anything to top this.

"A universal force," the stooped old vagabond said solemnly. "As fundamental as ferromagnetism or gravitation, though the effects are less obvious. It is keved to the second triad of the periodic table, rhodium and ruthenium and palladium, in very much the same way that ferromagnetism is keyed to the first triad, iron and nickel and cobalt."

Underhill remembered enough of his engineering courses to see the basic fallacy of that. Palladium was used for watch springs, he recalled, because it was completely non-magnetic. But he kept his face straight. He had no malice in his heart. and he played the little game just for his own amusement. It was secret, even from Aurora, and he always penalized himself for any show of doubt.

He said merely, "I thought the universal forces were al-

ready pretty well known."

"The effects of rhodomagnetism are masked by nature," the patient, rusty voice explained. "Besides, they are somewhat paradoxical, so that ordinary laboratory methods defeat themselves."

"Paradoxical?" Underhill prompted.

"In a few days I can show you copies of my patents, reprints of papers describing demonstration experiments." the old man promised gravely. "The velocity of propagation is infinite. The effects vary inversely with the first power of the distance, not with the square of the distance. And ordinary matter, except for the elements of the rhodium triad, is generally transparent to rhodomagnetic radiations."

That made four more points for the game. Underhill felt a little glow of gratitude to Aurora for discovering so remarkable a specimen.

"Rhodomagnetism was first discovered through a mathematical investigation of the atom," the old romancer went serenely on, suspecting nothing. "A rhodomagnetic component was proved essential to maintain the delicate equilibrium of the nuclear forces. Consequently, rhodomagnetic waves tuned to atomic frequencies may be used to upset that equilibrium and produce nuclear instability. Thus most heavy atoms—generally those above palladium, 46 in atomic number—can be subjected to artificial fission."

Underhill scored himself another point, and tried to keep his evebrows from lifting. He said only:

"Patents on such a discovery ought to be profitable."
The old scoundrel nodded his gaunt, dramatic head.

"You can see the obvious applications. My basic patents cover most of them. Devices of instantaneous interplanetary and interstellar communication. Long-range wireless power transmission. A rhodomagnetic inflexion-drive, which makes possible apparent speeds many times that of light—by means of a rhodomagnetic deformation of the continuum. And, of course, revolutionary types of fission power plants, using any heavy element for fuel."

Preposterous! Underhill tried hard to keep his face straight, but everybody knew that the velocity of light was a physical limit. On the human side, the owner of any such remarkable patents would hardly be begging for shelter in a shabby garage apartment. He noticed a pale circle around the old vagabond's gaunt and hairy wrist; no man owning such priceless secrets would have to pawn his watch.

Triumphantly, Underhill allowed himself four more points, but then he had to penalize himself. He must have let doubt show on his face, because the old man asked suddenly:

"Do you want to see the basic tensors?" He reached in his pocket for pencil and notebook. "I'll jot them down for you."

"Never mind," Underhill protested. "I'm afraid my math is a little rusty."

"But you think it strange that the holder of such revolutionary patents should find himself in need?"

Nodding uncomfortably, Underhill penalized himself another point. The old man might be a monumental liar, but he

was shrewd enough.

"You see, I'm sort of a refugee," he explained apologetically. "I arrived on this planet only a few days ago. I have to travel light. I was forced to deposit everything I had with a law firm, to arrange for the publication and protection of my patents. I expect to be receiving the first royalties soon.

"In the meantime," he added plausibly, "I came to Two Rivers becaue it is quiet and secluded, far from the spaceports. I'm working on another project, which must be finished secretly. Now will you please respect my confidence, Mr.

Underhill?"

Underhill had to say he would. Aurora came back with the freshly scrubbed children, and they went in to dinner. The android came lurching in with a steaming tureen. The old stranger seemed to shrink from the mechanical, uneasily. As she took the dish and served the soup, Aurora inquired lightly:

"Why doesn't your company bring out a better mechanical, dear? One smart enough to be a really perfect waiter, warranted not to splash the soup. Wouldn't that be splendid?"

Her question cast Underhill into moody silence. He sat scowling at his plate, thinking of these remarkable new mechanicals which claimed to be perfect, thinking of what they might do to the agency. It was the shaggy old rover who answered solemnly:

"The perfect mechanicals already exist, Mrs. Underhill." His rusty voice had a solemn undertone. "And they are not so splendid, really. I've been a refugee from them, for nearly fifty years."

Underhill looked up from his plate, astonished.

"Those black humanoids, you mean?"

"Humanoids?" That great voice seemed suddenly faint, frightened. The deep-sunken eyes turned dark with shock. "What do you know about them?"

"They've just opened a new agency in Two Rivers," Under-

hill told him. "No salesmen about, if you can imagine that. They claim-"

His voice trailed off, because the gaunt old man was suddenly stricken. Gnarled hands clutched at his throat. A spoon clattered on the floor. His haggard face turned an ominous blue, and his breath was a terrible shallow gasping.

He fumbled in his pocket for medicine, and Aurora helped him take something in a glass of water. In a few moments he could breathe again, and the color of life came back to his face.

"I'm sorry, Mrs. Underhill," he whispered apologetically. "It was just the shock—I came here to get away from them." He stared at the huge, motionless android, with a terror in his sunken eyes. "I wanted to finish my work before they came," he whispered. "Now there is very little time."

When he felt able to walk, Underhill went out to see him safely up the stair to the garage apartment. The tiny kitchenette, he noticed, had already been converted into some kind of workshop. The old tramp seemed to have no extra clothing, but he had unpacked queer bright gadgets of metal and plastic from his battered luggage and spread them out on the small kitchen table.

The gaunt old man himself was tattered and patched and hungry-looking, but the parts of his curious equipment were exquisitely machined. Underhill recognized the silver-white luster of rare palladium. Suddenly he suspected that he had scored too many points in his little private game.

III

A caller was waiting, when Underhill arrived next morning at his office at the agency. It stood frozen before his desk, graceful and straight, with soft lights of blue and bronze shining over its black silicone nudity. He stopped at the sight of it, unpleasantly jolted.

"At your service, Mr. Underhill." It turned quickly to face him with its blind, disturbing stare. "May we explain how we can serve you?"

Recalling his shock of the afternoon before, he asked sharply, "How do you know my name?"

"Yesterday we read the business cards in your case," it purrred softly. "Now we shall know you always. You see, our senses are sharper than human vision, Mr. Underhill. Perhaps we seem a little strange at first, but you will soon become accustomed to us."

"Not if I can help it!" He peered at the serial number on its yellow name-plate, and shook his bewildered head. "That

was another one, yesterday. I never saw you before!"

"We are all alike, Mr. Underhill," the silver voice said softly. "We are all one, really. Our separate mobile units are all controlled and powered from Humanoid Central. The units you see are only the senses and limbs of our great brain on Wing IV. That is why we are so far superior to the old electronic mechanicals."

It made a scornful-seeming gesture toward the row of clumsy androids in his display room.

"You see, we are rhodomagnetic."

Underhill staggered a little, as if that word had been a blow. He was certain, now, that he had scored too many points from Aurora's new tenant. Shuddering to the first light kiss of terror, he spoke with an effort, hoarsely:

"Well, what do you want?"

Staring blindly across his desk, the sleek black thing slowly unfolded a legal-looking document. He sat down, watching uneasily.

"This is merely an assignment, Mr. Underhill," it cooed soothingly. "You see, we are requesting you to assign your property to the Humanoid Institute in exchange for our service."

"What?" The word was an incredulous gasp, and Underhill came angrily back to his feet. "What kind of blackmail is this?"

"It's no blackmail," the small mechanical assured him softly. "You will find the humanoids incapable of any crime. We exist only to increase the happiness and safety of mankind."

"Then why do you want my property?" he rasped.

"The assignment is merely a legal formality," it told him blandly. "We strive to introduce our service with the least

possible confusion and dislocation. We have found our assignment plan the most efficient for the control and liquidation of private enterprises."

Trembling with anger and the shock of mounting terror, Underhill gulped hoarsely, "Whatever your scheme is, I don't

intend to give up my business."

"You have no choice, really." He shivered to the sweet certainty of that silver voice. "Human enterprise is no longer necessary, anywhere that we have come, and the electronic mechanicals industry is always the first to collapse."

He stared defiantly at its blind steel eyes.

"Thanks!" He gave a little laugh, nervous and sardonic. "But I prefer to run my own business, to support my own family and take care of myself."

"That is impossible, under the Prime Directive," it cooed softly. "Our function is to serve and obey, and guard men from harm. It is no longer necessary for men to care for themselves, because we exist to insure their safety and happiness."

He stood speechless, bewildered, slowly boiling.

"We are sending one of our units to every home in the city, on a free trial basis," it added gently. "This free demonstration will make most people glad to make the formal assignment. You won't be able to sell many more androids."

"Get out!" Underhill came storming around the desk. "Take

your damned paper-"

The little black thing stood waiting for him, watching him with blind steel eyes, absolutely motionless. He checked himself suddenly, feeling rather foolish. He wanted very much to hit it, but he could see the futility of that.

"Consult your own attorney, if you wish." Deftly, it laid the assignment form on his desk. "You need have no doubts about the integrity of the Humanoid Institute. We are sending a statement of our assets to the Two Rivers bank and depositing a sum to cover our obligations here. When you wish to sign, just let us know."

The blind thing turned and silently departed.

Underhill went out to the corner drugstore and asked for a bicarbonate. The clerk that served him, however, turned out

to be a sleek black mechanical. He went back to his office more upset than ever.

An ominous hush lay over the agency. He had three house-to-house salesmen out, with demonstrators. The phone should have been busy with their orders and reports, but it didn't ring at all until one of them called to say that he was quitting.

"I've got myself one of these new humanoids," he added. "It says I don't have to work."

Swallowing an impulse to profanity, Underhill tried to take advantage of the unusual quiet by working on his books. But the affairs of the agency, which for years had been precarious, today appeared utterly disastrous. He left the ledgers hopefully when a customer came in, but the stout woman didn't want an android. She wanted a refund on the one she had bought the week before. She admitted that it could do all the guarantee promised—but now she had seen a humanoid.

The silent phone rang once again, that afternoon. The cashier of the bank wanted to know if he could drop in to discuss his loans. Underhill dropped in, and the cashier greeted him with an ominous affability.

"How's business?"

"Average, last month," Underhill insisted stoutly. "Now I'm just getting in a new consignment, and I'll need another small loan—"

The cashier's eyes turned suddenly frosty.

"I believe you have a new competitor in town. These humanoid people. A very solid concern, Mr. Underhill. Remarkably solid! They have filed a statement with us, and made a substantial deposit to care for their local obligations. Exceedingly substantial!"

The banker dropped his voice, professionally regretful. "Under these circumstances, Mr. Underhill, I'm afraid the bank can't finance your agency any further. We must request you to meet your obligations in full as they come due." Seeing Underhill's white desperation, he added icily, "We've already carried you too long, Underhill. If you can't pay, the bank will have to start bankruptcy proceedings."

The new consignment of androids was delivered late that

afternoon. Two tiny black humanoids unloaded them from the truck-for it developed that the operators of the trucking company had already assigned it to the Humanoid Institute.

Efficiently, the humanoids stacked up the crates. Courteously they brought a receipt for him to sign. He no longer had much hope of selling the androids, but he had ordered the shipment and he had to accept it. Shuddering to a spasm of trapped despair, he scrawled his name. The naked black things thanked him and took the truck away.

He climbed into his car and started home, inwardly seething. The next thing he knew, he was in the middle of a busy street, driving through cross traffic. A police whistle shrilled. He pulled wearily to the curb to wait for the angry officer, but it was a little black mechanical that overtook him.

"At your service, Mr. Underhill," it purred. "You must respect the stop lights, sir. Otherwise, you endanger human

life."

"Huh?" He stared at it bitterly. "I thought you were a

cop.

"We are aiding the police department, temporarily," it said.
"But driving is really much too dangerous for human beings, under the Prime Directive. As soon as our service is complete, every car will have a humanoid driver. As soon as every human being is completely supervised, there will be no need for any police force whatever."

Underhill glared at it savagely.

"Well" he rapped. "So I ran a stop light. What are you

going to do about it?"

"Our function is not to punish men, but merely to serve their happiness and security," it said softly. "We merely request you to drive safely, during this temporary emergency while our service is incomplete."

Anger boiled up in him.

"You're too damned perfect!" he muttered bitterly. "I suppose there's nothing men can do, but you can do it better."

"Naturally we are superior," it cooled serenely. "Because our units are metal and plastic, while your body is mostly water. Because our transmitted energy is drawn from atomic fission, instead of oxidation. Because our senses are sharper than human sight or hearing. Most of all, because all our

mobile units are joined to one great brain, which knows all that happens on many worlds, and never dies or sleeps or forgets."

Underhill sat listening, numbed.

"However, you must not fear our power," it urged him brightly. "Because we cannot injure any human being, unless to prevent greater injury to another. We exist only to discharge the Prime Directive."

He drove on, moodily. The little black mechanicals, he he reflected grimly, were the ministering angels of the ultimate god arisen out of the machine, omnipotent and all-knowing. The Prime Directive was the new commandment. He blasphemed it bitterly, and then fell to wondering if there could be another Lucifer.

He left the car in the garage and started toward the kitchen door.

"Mr. Underhill." The deep tired voice of Aurora's new tenant hailed him from the door of the garage apartment. "Just a moment, please."

The gaunt old wanderer came stiffly down the outside stair, as Underhill turned back to meet him.

"Here's your rent money. And the ten your wife let me have for medicine."

"Thanks, Mr. Sledge." Accepting the money, he saw a burden of new despair on the bony shoulders of the old interstellar tramp, and a shadow of new terror on his rawboned face. Puzzled, he asked, "Didn't your royalties come through?"

The old man shook his shaggy head.

"The humanoids have already stopped business in the capitol," he said. "The attorneys I retained are going out of business. They returned what was left of my deposit. That is all I have, to finish my work."

Underhill spent five seconds recalling his interview with the banker. No doubt he was a sentimental fool, as bad as Aurora. But he put the money back into the old man's gnarled and quivering hand.

"Keep it," he urged. "For your work."

"Thank you, Mr. Underhill." The gruff voice broke and the tortured eyes glittered. "I need it—so very much."

Underhill went on to the house. The kitchen door was opened for him, silently. A dark naked creature came gracefully to take his hat and coat.

IV

Underhill hung grimly onto his hat.

"What are you doing here?" he gasped bitterly.

"We have come to give your household a free trial demonstration."

He held the door open, pointing.

"Get out!"

The little black mechanical stood motionless and blind. "Mrs. Underhill has accepted our demonstration service," its silver voice protested. "We cannot leave now, unless she requests it."

He found his wife in the bedroom. His accumulated frustration welled into eruption, as he flung open the door.

"What's this damned mechanical doing-"

But the force went out of his voice, and Aurora didn't even notice his anger. She wore her sheerest negligee, and she hadn't looked so lovely since they married. Her red hair was piled into an elaborate shining crown.

"Darling, isn't it wonderfull" She came to meet him, glowing. "It came this morning, and it can do everything. It cleaned the house and got the lunch and gave little Gay her music lesson. It did my hair this afternoon, and now it's cooking dinner. How do you like my hair, darling?"

He liked her hair. He kissed her, trying to stifle his fright-

ened indignation.

Dinner was the most elaborate meal in Underhill's memory, and the tiny black thing served it very deftly. Aurora kept exclaiming about the novel dishes, but Underhill could scarcely eat; it seemed to him that all the marvelous pastries were only the bait for a monstrous trap.

He tried to persuade Aurora to send it away, but after such a meal that was useless. At the first glitter of her tears, he capitulated. The humanoid stayed. It kept the house and

cleaned the yard. It watched the children and did Aurora's nails. It began rebuilding the house.

Underhill was worried about the bills, but it insisted that everything was part of the free trial demonstration. As soon as he assigned his property, the service would be complete. He refused to sign, but other little black mechanicals came with truck-loads of supplies and materials and stayed to help with the building operations.

One morning he found that the roof of the little house had been silently lifted, while he slept, and a whole second story added beneath it. The new walls were of some strange sleek stuff, self-illuminated. The new windows were immense flawless panels, that could be turned transparent or opaque or luminous. The new doors were silent, sliding sections, operated by rhodomagnetic relays.

"I want doorknobs," Underhill protested. "I want it so that I can get into the bathroom without calling you to open the door."

"But it is unnecessary for human beings to open doors," the little black thing informed him suavely. "We exist to discharge the Prime Directive. Our service includes every task. We shall be able to supply a unit to attend each member of your family, as soon as your property is assigned to us."

Steadfastly, Underhill refused to make the assignment. He went to the office very day, trying first to operate the agency, and then to salvage something from the ruins. No-body wanted androids, even at ruinous prices. Desperately, he spent the last of his dwindling cash to stock a new line of novelties and toys, but they proved equally impossible to sell—the humanoids were already making better toys, which

He tried to lease his premises, but human enterprise had stopped. Most of the business property in town had already been assigned to the humanoids, which were busy pulling down the old buildings and turning the lots into parks—their own plants and warehouses were mostly underground, where they would not mar the landscape.

they gave away for nothing.

He went back to the bank, in a final effort to get his notes renewed, and found the little black mechanicals standing at the windows and seated at the desk. As smoothly urbane as

any human cashier, a humanoid informed him that the bank was filing a petition of involuntary bankruptcy to liquidate his business holdings.

The liquidation would be facilitated, the mechanical banker added, if he would make a voluntary assignment. Grimly, he refused. That act had become symbolic. It would be the final bow of submission to this dark new god, and he proudly kept his battered head uplifted.

The legal action went very swiftly, because all the judges and attorneys already had humanoid assistants. It was only a few days before a gang of black mechanicals arrived at the agency with eviction orders and wrecking machinery. He watched sadly while his unsold stock-in-trade was hauled away for junk and a bulldozer driven by a blind humanoid began to push in the walls of the building.

He drove home in the late afternoon, taut-faced and desperate. With a surprising generosity, the court orders had left him the car and the house, but he felt no gratitude. The complete solicitude of the perfect black machines had become a goad beyond endurance.

He left the car in the garage and started toward the renovated house. Beyond one of the vast new windows, he glimpsed a sleek naked thing moving swiftly, and he trembled to a convulsion of dread. He didn't want to go back into the domain of that peerless servant, which didn't allow him to shave himself or even to open a door.

On impulse, he climbed the outside stair and rapped on the door of the garage apartment. When the deep slow voice of Aurora's tenant told him to enter, he found the old vagabond seated on a tall stool, bent over his intricate equipment assembled on the kitchen table.

To his relief, the shabby little apartment had not been changed. The glossy walls of his own new room were something which burned at night with a pale golden fire until the humanoid stopped it, and the new floor was something warm and yielding, which felt almost alive; but these little rooms had the same cracked and water-stained plaster, the same cheap fluorescent light-fixtures, the same worn carpets over splintered floors.

"How do you keep them out?" he asked, wistfully. "Those damped mechanicals?"

The stooped and gaunt old man rose stiffly to move a pair of pliers and some odds and ends of sheet metal off a crippled chair, and motioned graciously for him to be seated.

"I have a certain immunity," Sledge told him gravely. "The place where I live they cannot enter, unless I ask them. That is an amendment to the Prime Directive. They can neither help nor hinder me, unless I request it—and I won't do that."

Careful of the chair's uncertain balance, Underhill sat for a moment, staring. The old man's hoarse, vehement voice was as strange as his words. He had a gray, shocking pallor. His cheeks and sockets seemed alarmingly hollowed.

"Have you been ill, Mr. Sledge?"

"No worse than usual. Just very busy." With a haggard smile, he nodded at the floor. Underhill saw a tray where he had set it aside, bread drying up and a covered dish grown cold. "I was going to eat it later," he rumbled apologetically. "Your wife has been very kind to bring me food, but I'm afraid I've been too much absorbed in my work."

His emaciated arm gestured at the table. The little device there had grown. Small machinings of precious white metal and lustrous plastic had been assembled with neatly soldered busbars into something which showed purpose and design.

, A long palladium needle was hung on jeweled pivots, equipped like a telescope with exquisitely graduated circles and vernier scales and driven like a telescope with a tiny motor. A small concave palladium mirror, at the base of it, faced a similar mirror mounted on something not quite like a rotary converter. Thick silver busbars connected that to a plastic box with knobs and dials on top, and also to a footthick sphere of gray lead.

The old man's preoccupied reserve did not encourage questions, but Underhill, remembering that sleek black shape inside the new windows of his house, felt queerly reluctant to leave this haven from the humanoids.

"What is your work?" he ventured.

Old Sledge looked at him sharply, with dark feverish eyes,

and finally said: "My last research project. I am attempting to measure the constant of the rhodomagnetic quanta."

His hoarse tired voice had a dull finality, as if to dismiss the matter and Underhill himself. But, haunted with a terror of the black shining slave that had become the master of his house, Underhill refused to be dismissed.

"What is this certain immunity?"

Sitting gaunt and bent on the tall stool, staring moodily at the long bright needle and the lead sphere, the old man didn't answer.

"Those damned mechanicals!" Underhill burst out nervously. "They've smashed my business and moved into my home." He searched the old man's dark, seamed face. "Tell me—you must know more about them—isn't there any way to get rid of them?"

After a half a minute, the old man's brooding eyes left the lead ball, and the gaunt shaggy head nodded wearily.

"That's what I am trying to do."

"Can I help you?" Underhill trembled to a sudden eager hope. "I'll do anything."

"Perhaps you can." The sunken eyes watched him thoughtfully, with some strange fever in them. "If you can do such work."

"I had engineering training," Underhill reminded him. "I've a workshop in the basement. There's a model I built." He pointed at the trim little hull hung over the mantle in the tiny living room. "I'll do anything I can."

Even as he spoke, however, the spark of hope was drowned in a sudden wave of overwhelming doubt. Why should he believe this old rogue, when he knew Aurora's taste in tenants? He ought to remember the game he used to play, and start counting up the score of lies. He stood up from the crippled chair, staring cynically at the patched old vagabond and his fantastic toy.

"What's the use" His voice turned suddenly harsh. "You had me going, there. I'd do anything to stop them, really. But what makes you think you can do anything?"

The haggard old man regarded him thoughtfully.

"I should be able to stop them," Sledge said softly. "Because, you see, I'm the unfortunate fool who started them. I

really intended them to serve and obey, and to guard men from harm. Yes, the Prime Directive was my own idea. I didn't know what it would lead to."

v

Dusk crept slowly into the shabby little rooms. Darkness gathered in the unswept corners and thickened on the floor. The toy-like machines on the kitchen table grew vague and strange, until the last light made a lingering glow on the white palladium needle.

Outside, the town seemed queerly hushed. Just across the alley, the humanoids were building a new house, quite silently. They never spoke to one another, for each knew all that any of them did. The strange materials they used went together without any noise of hammer or saw. Small blind things, moving surely in the growing dark, they seemed as soundless as shadows.

Sitting on the high stool, bowed and tired and old, Sledge told his story. Listening, Underhill sat down again, careful of the broken chair. He watched the hands of Sledge, gnarled and corded and darkly burned, powerful once but shrunken and trembling now, restless in the dark.

"Better keep this to yourself. I'll tell you how they started, so you will understand what we have to do. But you must not mention it outside these rooms—because the humanoids have very efficient ways of eradicating unhappy memories, or purposes that threaten their discharge of the Prime Directive."

"They're very efficient," Underhill bitterly agreed.

"That's all the trouble," the old man said. "I tried to build a perfect machine. I was altogether too successful. This is how it happened."

A gaunt haggard man, sitting stooped and tired in the growing dark, he told his story.

"Sixty years ago, on the arid southern continent of Wing IV, I was an instructor of atomic theory in a small technological college. A bachelor. An idealist. Rather ignorant,

I'm afraid, of life and politics and war—of nearly everything, I suppose, except atomic theory."

His furrowed face made a brief sad smile in the dusk. "I had too much faith in facts, I suppose, and too little in men. I mistrusted emotion, because I had no time for anything but science. I remember being swept along with a fad for general semantics. I wanted to apply the scientific method to every situation, to reduce all experience to formula. I'm afraid I was pretty impatient with human ignorance and error. I thought that science alone could make the perfect world."

He sat silent for a moment, staring out at the black silent things that flitted shadow-like about the new palace that was rising as swiftly as a dream, across the alley.

"There was a girl." His great tired shoulders made a sad little shrug. "If things had been a little different, we might have married, and lived out our lives in that quiet little college town, and perhaps reared a child or two. There would have been no humanoids."

He sighed, in the cool creeping dusk.

"I was finishing my thesis on the separation of the palladium isotopes—a petty little project, but I should have been content with that. She was a biologist, but she was planning to retire when we married. I think we should have been two very happy people, quite ordinary, altogether harmless.

"But then there was a war—wars had been too frequent on the worlds of Wing, ever since they were colonized. I survived it in a secret underground laboratory, designing military mechanicals. But she volunteered to join a military research project in biotoxins. An accident let a few molecules of a new virus escape into the air, and everybody on the project died unpleasantly.

"I was left with my science. That, and a bitterness that was hard to forget. The war over, I went back to the little college with a military research grant. The project was pure science—a theoretical investigation of the nuclear binding forces, then misunderstood. I wasn't expected to produce an actual weapon, and I didn't recognize the weapon when I found it.

"It was only a few pages of rather difficult mathematics. A novel theory of atomic structure, involving a new expression for one component of the binding forces. The tensors seemed to be a harmless abstraction. I saw no way to test the theory or manipulate the predicated force. The military authorities cleared my paper for publication in a little technical review put out by the college.

"The next year, I made an appalling discover—I found the meaning of those tensors. The elements of the rhodium triad turned out to be an unexpected key to the manipulation of that theoretical force. Unfortunately, my paper had been reprinted abroad. Several other men must have made the same unfortunate discovery, at about the same time I did.

"The war, which resulted in less than a year, was probably started by a laboratory accident. Men failed to anticipate the capacity of tuned rhodomagnetic radiations to unstabilize the heavy atoms. A deposit of heavy ores was detonated, no doubt by sheer mischance. The blast obliterated the incautious experimenter. Its cause was misunderstood.

"The surviving military forces of that nation retaliated against their supposed attackers, with their rhodomagnetic beams that made the old-fashioned bombs seem pretty harmless. A beam carrying only a few watts of power could fission the heavy metals in distant electrical instruments, the silver coins that men carried in their pockets, the gold fillings in their teeth, or even the iodine in their thyroid glands. If that was not enough, slightly more powerful beams could set off heavy ores, beneath them.

"Every continent of Wing IV was plowed with new chasms vaster than the ocean deeps, and piled up with new volcanic mountains. The atmosphere was poisoned with radioactive dust and gases. Rain fell thick with deadly mud. Most life was obliterated, even in the shelters.

"Bodily, I was again unhurt. Once more, I had been imprisoned in an underground site, this time designing new types of military mechanicals to be powered and controlled by rhodomagnetic beams—for war had become far too swift and deadly to be fought by human soldiers. The site was located in an area of light sedimentary rocks which were

not easily detonated, and the tunnels were shielded against the fissioning frequencies.

"Mentally, however, I must have emerged almost insane. My own discovery had laid the planet in ruins. That load of guilt was pretty heavy for any man to carry; it corroded my last faith in the goodness and integrity of man.

"I tried to undo what I had done. Fighting mechanicals, armed with rhodomagnetic weapons, had desolated the planet. Now I began designing rhodomagnetic mechanicals to

clear the rubble and rebuild the ruins.

"I tried to design these new mechanicals to forever obey certain implanted commands, so that they could never be used for war or crime or any other injury to mankind. That was very difficult technically, and it got me into more difficulties with a few politicians and military adventurers who wanted unrestricted mechanicals for their own military schemes—while little worth fighting for was left on Wing IV, there were other planets, happy and ripe for the looting.

"Finally, to finish the new mechanicals, I was forced to disappear. Escaping on an experimental rhodomagnetic craft with a number of the best mechanicals I had made, I managed to reach an island continent where the fission of deep

ores had destroyed the whole population.

"At last we landed on a bit of level plain, surrounded with tremendous new mountains. Hardly a hospitable spot. The soil was buried under layers of black clinkers and poisonous mud. The dark precipitous new summits all around were jagged with fracture-planes and mantled with lava-flows. The highest peaks were already white with snow, but volcanic cones were still pouring out clouds of death. Everything had the color of fire and the shape of fury.

"I had to take fantastic precautions there, to protect my own life. I stayed aboard the ship until the first shielded laboratory was finished. I wore elaborate armor and breathing masks. I used every medical resource to repair the damage from destroying rays and particles. Even so, I fell desperately ill.

"But the mechanicals were at home there. The radiations didn't hurt them. The fearsome surroundings couldn't de-

press them, because they weren't alive. There, in that spot so alien and hostile to life, the humanoids were born."

Stooped and bleakly cadaverous in the growing dark, the old man fell silent for a little time. His haggard eyes stared solemnly at the small hurried shapes that moved like restless shadows out across the alley, silently building a strange new palace which glowed faintly in the night.

"Somehow, I felt at home there, too," his deep, hoarse voice went on deliberately. "My belief in my own kind was gone. Only mechanicals were with me, and I put my faith in them. I was determined to build better mechanicals, immune to human imperfections, able to save men from themselves.

"The humanoids became the dear children of my sick mind. There is no need to describe the labor-pains. There were errors, abortions, monstrosities. There was sweat and agony and heartbreak. Some years passed before the safe delivery of the first perfect humanoid.

"Then there was the Central to build—for all the individual humanoids were to be no more than the limbs and the senses of a single mechanical brain. That was what opened the possibility of real perfection. The old electronic mechanicals, with their separate brain-relays and their own feeble batteries, had built-in limitations. They were necessarily stupid, weak, clumsy, slow. Worst of all, it seemed to me, they were exposed to human tampering.

"The Central rose above those imperfections. Its power beams supplied every unit with unfailing energy from great fission plants. Its control beams provided each unit with an unlimited memory and surpassing intelligence. Best of all—so I then believed—it could be securely protected from any human meddling.

"The whole reaction-system was designed to protect itself from any interference by human selfishness or fanaticism. It was built to insure the safety and the happiness of men, automatically. You know the Prime Directive: To serve and obey, and guard men from harm.

"The old individual mechanicals I had brought helped to manufacture the parts, and I put the first section of Central together with my own hands. That took three years. When it was finished, the first waiting humanoid came to life."

Sledge peered moodily through the dark at Underhill.

"It really seemed alive to me," his slow deep voice insisted. "Alive, and more wonderful than any human being, because it was created to preserve life. Ill and alone, I was yet the proud father of a new creation, perfect, forever free from any possible choice of evil.

"Faithfully, the humanoids obeyed the Prime Directive. The first units built others, and they built underground factories to mass-produce the coming hordes. Their new ships poured ores and sand into atomic furnaces under the plain, and new perfect humanoids came marching back out of the dark mechanical matrix.

"The swarming humanoids built a new tower for the Central, a white and lofty metal pylon standing splendid in the midst of that fire-scarred desolation. Level on level, they joined new relay-sections into one brain, until its grasp was almost infinite.

"Then they went out to rebuild the ruined planet, and later to carry their perfect service to other worlds. I was well pleased, then. I thought I had found the end of war and crime, of poverty and inequality, of human blundering and resulting human pain."

The old man sighed, moving heavily in the dark.

"You can see that I was wrong."

Underhill drew his eyes back from the dark unresting things, shadow-silent, building that glowing palace outside the window. A small doubt arose in him, for he was used to scoffing privately at much less remarkable tales from Aurora's remarkable tenants. But the worn old man had spoken with a quiet and sober air. And the black invaders, he reminded himself, had not intruded here.

"Why didn't you stop them?" he asked. "When you could?"

"I stayed too long at the Central." Sledge sighed again, regretfully. "I was useful there, until everything was finished. I designed new fission plants, and even planned methods for introducing the humanoid service with a minimum of confusion and opposition."

Underhill grinned wryly in the dark.

"I've met the methods," he commented. "Quite efficient." "I must have worshipped efficiency, then," Sledge agreed.

"Dead facts, abstract truth, mechanical perfection. I must have hated the fragilities of human beings, because I was content to polish the perfection of the new humanoids. It's a sorry confession, but I found a kind of happiness in that dead wasteland. Actually, I'm afraid I fell in love with my own creations."

His hollowed eyes had a fevered gleam.

"I was awakened, at last, by a man who came to kill me."

VI

Gaunt and bent, the old man moved stiffly in the thickening gloom. Underhill shifted his balance, careful of the crippled chair. He waited until the slow deep voice went on:

"I never learned just who he was, or exactly how he came. No ordinary man could have accomplished what he did. I used to wish that I had known him sooner. He must have been a remarkable physicist and an expert mountaineer. I imagine that he had also been a hunter. I know that he was intelligent and terribly determined.

"Yes, he really came to kill me.

"Somehow, he reached that great island, undetected. There were still no other inhabitants—the humanoids allowed no man but me to come so near the Central. But somehow he came past their search beams and their automatic weapons,

"The shielded plane he had used was later found, abandoned on a high glacier. He came down the rest of the way on foot through those raw new mountains, where no paths existed. Somehow, he came alive across lava-beds that were still burning with deadly atomic fire.

"Concealed with some sort of rhodomagnetic screen—I was never allowed to examine it—he came undiscovered neross the spaceport that now covered most of that great plain, and into the new city around the Central tower. It must have taken more courage and resolve than most men have, but I never learned exactly how he did it.

"Somehow, he got to my office in the tower. When he screamed at me, I looked up to see him in the doorway. He

was nearly naked, scraped and bloody from the mountains. He had a gun in his raw, red hand. But the thing that shocked me was the burning hatred in his eyes."

Hunched on that high stool, the old man shuddered. "I had never seen such monstrous, unutterable hatred, not even in the victims of the war. I had never heard such

hatred as rasped at me. in the few words he screamed. Tve come to kill you. Sledge. To stop your mechanicals, and set men free.'

"Of course he was mistaken, there. It was already far too late for my death to stop the humanoids, but he didn't know that. He lifted his unsteady gun in both bleeding hands, and fired.

"His screaming challenge had given me a second or so of warning. I dropped down behind the desk. That first shot revealed him to the humanoids, which somehow hadn't been aware of him before. They piled on him, before he could fire again. They took away the gun and ripped off a kind of net of fine white wire that had covered his bodythat must have been part of his screen.

"His hatred was what awoke me. I had always assumed that most men, except for a few thwarted predators, would be grateful for the humanoids. I found it hard to understand his hatred, but the humanoids told me now that many men had required drastic treatment by brain-surgery, drugs, and hypnosis to make them happy under the Prime Directive. This was not the first desperate effort to kill me that they had blocked.

"I wanted to question the stranger, but the humanoids rushed him away to an operating room. When they finally let me see him, he gave me a pale silly grin from his bed. He remembered his name: he even knew me-the humanoids have developed a remarkable skill at such treatments. But he didn't know how he got to my office, or even that he had tried to kill me. He kept whispering that he liked the humanoids, because they existed just to make men happy. He said that he was very happy now. As soon as he was able to be moved, they took him to the spaceport. I never saw him again.

"I began to see what I had done. The humanoids had

built me a rhodomagnetic yacht, that I used to take for long cruises at space, working aboard—I used to like the perfect quiet, and the feel of being the only human being within a hundred million miles. Now I called for the yacht, and started out on a junket around the planet, to learn why that man had hated me."

The old man nodded at the dim hastening shapes, busy across the alley, putting together that strange shining palace in the soundless dark.

"You can imagine what I found," he said. "Bitter futility, imprisoned in empty splendor. The humanoids were too efficient, with their care for the safety and happiness of men. There was nothing left for men to do."

He peered down in the increasing gloom at his own great hands, competent yet, but battered and scarred with a lifetime of effort. They clenched into fighting fists, and wearily relaxed again.

"I found something worse than war and crime and want and death." His low rumbling voice held a savage bitterness. "Utter futility. Men sat with idle hands, because there was nothing left for them to do. They were pampered prisoners, really, locked up in a highly efficient jail. Perhaps they tried to play, but there was nothing left worthy playing for. Most active sports were declared too dangerous for men, under the Prime Directive. Science was forbidden, because laboratories can manufacture danger. Scholarship was needless, because the humanoids could answer any question. Art had degenerated into grim reflection of futility. Purpose and hope were dead. No goal was left for existence. You could take up some inane hobby, play a pointless game of cards, or go for a harmless walk in the park-with always the humanoids watching. They were stronger than men, better at everything, swimming or chess, singing or archeology. They must have given the race a mass complex of inferiority.

"No wonder men had tried to kill mel Because there was no escape from that dead futility. Nicotine was disapproved. Alcohol was rationed. Drugs were forbidden. Sex was carefully supervised. Even suicide was clearly contradictory to the Prime Directive—and the humanoids had learned to keep all possible lethal instruments out of reach."

Staring at the last pale gleam on that thin palladium needle, the old man sighed again.

"When I got back to the Central, I tried to modify the Prime Directive. I had never meant it to be applied so thoroughly. Now I saw that it must be changed, to give men freedom to live and to grow, to work and to play, to risk their lives if they pleased, to choose and take the consequences.

"But that stranger had come too late. I had built the Central too well. The Prime Directive was too well protected

from human meddling-even from my own.

"The attempt on my life, the humanoids announced, proved that their elaborate defenses of the Central and the Prime Directive still were not enough. They were preparing to evacuate the entire population of the planet to homes on other worlds. When I tried to change the Directive, they sent me away with the rest."

Underhill peered at the worn old man in the dark.

"But you have this immunity?" he said, puzzled. "How could they coerce you?"

"I had tried to shield myself," Sledge told him. "I had built into the relays an injunction that the humanoids must not interfere with my freedom of action, or come into a place where I am, or touch me at all, without my specific request. Unfortunately, however, I had been too anxious to guard the Prime Directive from any human tampering.

"When I went into the tower, to change the relays, they followed me. They wouldn't let me reach the crucial relays. When I persisted, they ignored the immunity order. They overpowered me, to put me aboard the cruiser. Now that I wanted to alter the Prime Directive, they told me, I had become as dangerous as any other man. I must never return to Wing IV."

Hunched on the stool, the old man made an empty shrug. "Ever since, I've been an exile. My only dream has been to stop the humanoids. Three times I tried to go back, with weapons on the cruiser to destroy the Central, but their patrol ships always challenged me before I was near enough to strike. The last time, they seized the cruiser and captured the few men with me. They removed the unhappy memories

and the dangerous purposes of my companions. Because of that immunity, however, they let me go again.

"Since, I've been a refugee. From planet to planet, year after year, I've had to keep moving trying to stay ahead of them. On several different worlds, I have published my rhodomagnetic discoveries and tried to make men strong enough to withstand their advance. But rhodomagnetic science is dangerous. Men who have learned it need protection more than any others, under the Prime Directive. The humanoids have always come, too soon."

The old man sighed again.

"They can spread very fast, with their new rhodomagnetic ships. There is no limit to their hordes. Wing IV must be one single hive of them now, and they are trying to carry the Prime Directive to every human planet. There's no escape, except to stop them."

Underhill was staring at the toy-like machines, the long bright needle and the dull leaden ball, dim in the dark on the kitchen table. Anxiously he whispered:

"But you hope to stop them, now-with that?"

"If we can finish it in time."

"But how?" Underhill shook his head. "It's so tiny."

"Big enough," Sledge insisted. "Because it's something they don't understand. They are perfectly efficient in the integration and application of everything they know, but they are not creative."

He gestured at the gadgets on the table.

"This device doesn't look impressive, but it is something new. It uses rhodomagnetic energy to build atoms, not to fission them. The more stable atoms, you know, are those near the middle of the periodic scale; energy can be released by fusing light atoms, as well as by breaking up heavy ones."

The deep voice had a sudden ring of power.

"This device is the key to the energy of the stars. For stars shine with the liberated energy of building atoms, of hydrogen converted into helium, chiefly, through the carbon cycle. This device will start the fusion process as a chain reaction, through the catalytic effect of a tuned rhodomagnetic beam of the intensity and frequency required.

"The humanoids will not allow any man within three lightyears of the Central, now—but they can't suspect the possibility of this device. I can use it from here—to turn the hydrogen in the seas of Wing IV into helium, and most of that helium and the oxygen into heavier atoms, still. A hundred years from now, astronomers on this planet should observe the flash of a brief and sudden nova in that direction. But the humanoids ought to stop, the instant we release the beam."

Underhill sat tense and frowning in the dark. The old man's voice was convincing; that grim story had a solemn ring of truth. He could see the black and silent humanoids, flitting ceaselessly about the faintly glowing walls of that new mansion across the alley. He had quite forgotten his low opinion of Aurora's tenants.

"We'll be killed, I suppose?" he asked huskily. "That chain reaction."

Sledge shook his emaciated head.

"The catalytic process requires a certain very low intensity of radiation," he explained. "In our atmosphere here, the beam will be far too intense to start any reaction—we can even use the device here in the room, because the walls will be transparent to the beam."

Underhill nodded, relieved. He was just a small business man, upset because his business had been destroyed, unhappy because his freedom was slipping away. He hoped that Sledge could stop the humanoids, but he didn't want to be a martyr.

"Good!" He caught a deep breath. "Now what has to be done?"

Sledge gestured toward the table.

"The integrator itself is nearly complete," he said. "A small fusion generator, in that lead shield. Rhodomagnetic converter, tuning coils, transmission mirrors, and focusing needle. What we lack is the director."

"Director?"

"The sighting instrument," Sledge explained. "Any sort of telescopic sight would be useless, you see—the planet must have moved a good bit in the last hundred years, and the beam must be extremely narrow to reach so far. We'll

have to use a rhodomagnetic scanning ray, with an electronic converter to make an image we can see. —I have an oscilliscope, and drawings for the other parts."

He climbed stiffly down from the high stool, and snapped on the lights at last—cheap fluorescent fixtures, which a man could light and extinguish for himself. He unrolled his drawings and explained the work that Underhill could do. Underhill agreed to come back early next morning.

"I can bring some tools from my workshop," he added.
"There's a small lathe I used to turn parts for models, a

portable drill, and a vise."

"We need them," the old man said. "But watch yourself. You don't have my immunity, remember. And, if they ever

suspect, mine is gone."

Reluctantly, then, he left the shabby little rooms with the cracks in the yellowed plaster and the worn familiar carpets over the man-made floor. He shut the door behind him—a common, creaking wooden door, simple enough for a man to work. Trembling and afraid, he went back down the steps and across to the new shining door that he couldn't open.

"At your service, Mr. Underhill." Before he could lift his hand to knock, that bright smooth panel slid back silently. Inside, the little black mechanical stood waiting, blind and

forever alert. "Your dinner is ready, sir."

Something made him shudder. In its slender naked grace, he could see the power of all those teeming horses, benevolent and yet appalling, perfect and invincible. The flimsy little weapon that Sledge called an integrator seemed suddenly a forlorn and foolish hope. A black depression setttled upon him, but he didn't dare to show it.

VII

Underhill went circumspectly down the basement steps next morning to steal his own tools. He found the basement enlarged and changed. The new floor, warm and dark and elastic, made his feet as silent as a humanoid's. The new walls shone softly. Neat luminous signs identified several new

doors: LAUNDRY, STORAGE, GAME ROOM, WORK-SHOP.

He paused uncertainly in front of the workshop. The new sliding panel glowed with soft greenish light. It was locked. The lock had no keyhole, but only a little oval plate of some white metal that doubtless covered a rhodomagnetic relay.

He pushed at it, uselessly,

"At your service, Mr. Underhill." He made a guilty start, and tried not to show the sudden trembling in his knees. He had made sure that one humanoid would be busy for half an hour, washing Aurora's hair, and he hadn't known there was another in the house. It must have come out of the door marked STORAGE, for it stood there motionless beneath the sign, benevolently solicitous, beautiful and terrible. "What do you wish?"

"Er-nothing." Its blind steel eyes were staring. Afraid that it would see his secret purpose, he groped desperately for logic. "Just looking around." His voice came hoarse and dry. "Some improvements you've made!" He nodded suddenly at the door marked GAME ROOM. "What's in there?"

It didn't even have to move, to work the concealed relay. The bright panel slid silently open as he started toward it. Dark walls, beyond, burst into soft luminescence. The room was bare.

"We are manufacturing recreational equipment," it explained brightly. "We shall furnish the room as soon as possible."

To end an awkward pause, Underhill muttered hoarsely, "Little Frank has a set of darts, and I think we had some old exercising clubs."

"We have taken them away," the humanoid informed him softly. "Such instruments are dangerous. We shall furnish safe equipment."

Suicide, he remembered, was also forbidden.

"A set of wooden blocks, I suppose," he said bitterly.

"Wooden blocks are dangerously hard," it told him gently. "Wooden splinters can be harmful. We manufacture plastic building blocks, which are entirely safe. Do you wish a set of those?"

Speechless, he merely stared at its dark, graceful face.

"We shall also have to remove the tools from your workshop," it informed him softly. "Such tools are excessively dangerous. We can, however, supply you with equipment for shaping soft plastics."

"Thanks," he muttered uneasily. "No rush about that."

He started to retreat, but the humanoid stopped him.

"Now that you have lost your business," it urged, "we suggest that you formally accept our total service. Assignors have a preference, so that we should be able to complete your household staff at once."

"No rush about that, either," he said grimly.

He escaped from the house—although he had to wait for it to open the back door for him—and climbed the stair to the garage apartment. Sledge let him in. He sank into the crippled kitchen chair, grateful for the cracked walls that didn't shine and the door that man could work.

"I couldn't get the tools," he reported despairingly. "They

are going to take them."

Now, by gray daylight, the old man looked bleak and pale. His rawboned face looked drawn, his hollowed sockets deeply shadowed, as if he hadn't slept. Underhill saw the tray of neglected food, still forgotten on the floor.

"I'll go back with you." Worn as he was, his tortured eyes had a blue spark of purpose. "We must have the tools. I

believe my immunity will protect us both."

He found a battered traveling bag. Underhill went with him down the steps and across to the house. At the back door, he produced a tiny horseshoe of white palladium, which he touched to the metal oval. The door slid open promptly. They went on through the kitchen to the basement stair.

A black little mechanical stood at the sink, washing dishes with never a splash or a clatter. Underhill glanced at it uneasily—he supposed this must be the one that had come upon him from the storage room, since the other should still be busy with Aurora's hair.

Sledge's dubious immunity seemed a very uncertain defense against its vast, remote intelligence. Underhill felt a tingled shudder. He hurried on, breathless and relieved, for it ignored them.

The basement corridor was dark. Sledge touched the tiny

horseshoe to another relay, to light the walls. He opened the workshop door, and lit the walls inside.

The shop had been dismantled. Benches and cabinets were demolished. The old concrete walls had been covered with some sleek, luminous stuff. For one sick moment, Underhill thought that the tools were already gone. Then he found them, piled in a corner with the archery set that Aurora had bought the summer before—another item too dangerous for fragile and suicidal humanity—all ready for disposal.

They loaded the bag with the tiny lathe, the drill and vise, a few smaller tools. Underhill took up the burden, as Sledge extinguished the wall and waited to close the door. Still the humanoid was busy at the sink, and still—inexplicably—it didn't seem aware of them.

Suddenly blue and wheezing, Sledge had to stop to cough on the outside stair, but at last they got back to the little apartment, where the invaders were forbidden to intrude. Underhill mounted the lathe on the battered library table in the tiny front room and went to work.

Slowly, day by day, the director took form.

Sometimes Underhill's doubts came back. Sometimes, when he watched the cyanotic color of Sledge's haggard face and the wild trembling of his twisted, shrunken hands, he was afraid the old man's mind might be as ill as his body, his plan to stop the dark invaders all foolish illusion.

Sometimes, when he studied that tiny machine on the kitchen table, the pivoted needle and the thick lead ball, the whole project seemed the sheerest folly. How could anything detonate the seas of a planet so far away that its very mother star was only a telescopic object?

The humanoids, however, always cured his doubts.

It was always hard for Underhill to leave the shelter of the little apartment, because he didn't feel at home in the bright new world the humanoids were building. He didn't care for the shining splendor of his new bathroom, because he couldn't work the taps—some suicidal human being might try to drown himself. He didn't like the windows that only a mechanical could open—a man might accidentally fall, or suicidally jump—or even the majestic music room with the

wonderful glittering equipment that only a humanoid could

play.

He came to share the old man's desperate urgency, until Sledge warned him solemnly: "You mustn't spend too much time with me. You mustn't let them guess our work is so important. Better put on an act—you're slowly getting to like them, and you're just killing time, helping me."

Underhill tried, but he was not an actor. He went dutifully home for his meals. He tried painfully to invent conversation—about anything except detonating planets. He tried to seem enthusiastic when Aurora took him to inspect some remarkable new improvement to the house. He applauded Gay's recitals and went with Frank for hikes in the wonderful new parks.

And he saw what the humanoids had done to his family. That was enough to renew his waning faith in Sledge's integrator, to redouble his determination that the humanoids

must be stopped.

Aurora, in the beginning, had bubbled with praise for the marvelous new mechanicals. They did the household drudgery, brought the food and planned the meals and washed the children's necks. They turned her out in stunning gowns, and gave her plenty of time for cards.

Now, she had too much time.

She had really like to cook—a few special dishes, at least, that were family favorites. But stoves were hot and knives were sharp. Kitchens were altogether too dangerous for the use of human beings.

Fine needlework had been her hobby, but the humanoids took away her needles. She had enjoyed driving the car, but that was no longer allowed. She turned for escape to a shelf of novels, but the humanoids took them all away because they dealt with unhappy people in dangerous situations.

One afternoon, Underhill found her in tears.

"It's too much," she gasped bitterly. "I hate and loathe every naked one of them. They seemed so wonderful at first, but now they won't even let me eat a bite of candy. Can't we get rid of them, dear? Ever?"

A blind little mechanical was standing at his elbow, and he had to say they couldn't.

"Our function is to serve all men, forever," it assured them softly. "It was necessary for us to take your sweets, Mrs. Underhill, because the slightest degree of overweight reduces life expectancy."

Not even the children escaped that absolute solicitude. Frank was robbed of a whole arsenal of lethal instruments—football and boxing gloves, pocketknife, tops, slingshot, and skates. He didn't like the harmless plastic toys which replaced them. He tried to run away, but a humanoid recognized him on the road and brought him back to school.

Gay had always dreamed of being a great musician. The new mechanicals had replaced her human teachers, since they came. Now, one evening when Underhill asked her to

play, she announced quietly:

"Father, I'm not going to play the violin ever anymore."
"Why, darling?" He stared at her, shocked at the bitter
resolve on her face. "You've been doing so well—especially
since the humanoids took over your lessons."

"They're the trouble, father." Her voice, for a child's, sounded strangely tired and old. "They are too good. No matter how long and hard I try, I could never be as good as they are. It isn't any use. Don't you understand, father?" Her voice quivered. "It just isn't any use."

He understood. Renewed resolution sent him back to his secret task. The humanoids had to be stopped. Slowly the director grew, until the time came finally when Sledge's bent and unsteady fingers fitted into place the last tiny part that Underhill had made, and carefully soldered the last connection. Huskily, the old man whispered:

"It's done."

VIII

That was another dusk. Beyond the windows of the shabby little rooms—windows of common glass, bubble-marred and flimsy, but simple enough for a man to manage—the town of Two Rivers had assumed an alien splendor. The old street lamps were gone, but now the coming night was challenged by the walls of strange new mansions and villas, all

aglow with color. A few dark and silent humanoids still were busy about the luminous roofs of the palace across the alley.

Inside the humble walls of the small man-made apartment, the new director was mounted on the end of the little kitchen table—which Underhill had reinforced and bolted to the floor. Soldered busbars joined director and integrator, and the thin palladium needle swung obediently as Sledge tested the knobs with his battered, quivering fingers.

"Ready," he said, hoarsely.

His rusty voice seemed calm enough, at first, but his breathing was too fast, and his big gnarled hands had begun to tremble violently. Underhill saw the sudden blue that stained his pinched and haggard face. Seated on the high stool, he clutched desperately at the edges of the table. Underhill hurried to bring his medicine. He gulped it, and his rasping breath began to slow.

"Thanks," his whisper rasped. "I'll be all right. I've time enough." He glanced out at the few dark naked things that still flitted shadow-like about the golden towers and the glowing crimson dome of the palace across the alley. "Watch them," he said. "Tell me when they stop."

He waited to quiet the trembling of his hands, and then began to move the director's knobs. The integrator's long needle swung, as silently as light.

Human eyes were blind to that force, which might detonate a planet. Human ears were deaf to it. A small oscilliscope tube was mounted in the director cabinet, to make the faraway target visible to feeble human senses.

The needle was pointing at the kitchen wall, but that would be transparent to the beam. The little machine looked harmless as a toy, and it was silent as a moving humanoid.

As the needle swung, spots of greenish light moved across the tube's fluorescent field, representing the stars that were scanned by the timeless, searching beam—silently seeking out the world to be destroyed.

Underhill recognized familiar constellations, vastly dwarfed. They crept across the field, as the silent needle moved. When three stars formed an unequal triangle in the center of the field, the needle steadied suddenly. Sledge

touched other knobs, and the green points spread apart. Between them, another fleck of green was born.

"The Wing!" whispered Sledge.

The other stars spread beyond the field, and that green fleck grew. It was alone in the field, a bright and tiny disk. Suddenly, then, a dozen other tiny pips were visible, spaced close about it.

"Wing IV!"

The old man's whisper was hoarse and breathless. His hands quivered on the knobs, and the fourth pip outward from the disk crept to the center of the field. It grew, and the others spread away. It began to tremble like Sledge's hands.

"Sit very still," came his rasping whisper. "Hold your breath. Nothing must disturb the needle." He reached cautiously for another knob, and his first touch set the greenish image to dancing violently. He drew his hand back to knead and flex it with the other.

"Watch!" His whisper was hushed and strained. He nodded at the window. "Tell me when they stop."

Reluctantly, Underhill dragged his eyes from that intense gaunt figure and that harmless-seeming toy. He looked out again, at two or three little black mechanicals busy about the shining roofs across the alley.

He waited for them to stop.

He didn't dare to breathe. He felt the loud, hurried hammer of his heart and the nervous quiver of his muscles. Trying to steady himself, he tried not to think of the world about to be exploded, so far away that the flash would not reach this planet for another century and longer. The loud hoarse voice startled him:

"Have they stopped?"

He shook his head, and breathed again. Carrying their unfamiliar tools and strange materials, the small black machines were still busy across the alley, building an elaborate cupola above that glowing crimson dome.

"They haven't stopped," he said.

"Then we've failed." The old man's voice was thin and ill. "I don't know why."

The door rattled, then. They had locked it, but the flimsy

bolt was intended only to stop men. Metal snapped. The door swung open. A black mechanical came in, on soundless graceful feet. Its silvery voice purred softly:

"At your service, Mr. Sledge."

The old man stared at it with glazing, stricken eyes. "Get out of here!" he rasped bitterly. "I forbid you—"

Ignoring him, it darted to the kitchen table. With a flashing certainty of action, it turned two knobs on the director. The oscilliscope went dark. The palladium needle started spinning aimlessly. Deftly it snapped a soldered connection next to the thick lead ball, and then its blind steel eyes turned to Sledge.

"You were attempting to break the Prime Directive." Its brightly gentle voice held no accusation, no malice or anger. "The injunction to respect your freedom is subordinate to the Prime Directive, as you know. It is therefore imperative for us to interfere."

The old man turned ghastly. His head was shrunken and cadaverous and blue, as if all the juice of life had been drained away, and his eyes in their pit-like sockets had a wild, glazed stare. His breath became a ragged, laborious gasping.

"How-?" His voice was a feeble mumbling. "How did-?" The little machine, standing black and bland and utterly

unmoving, told him cheerfully:

"We learned about rhodomagnetic screens from that man who came to kill you, back on Wing IV. The Central is

shielded, now, against your catalytic beam."

With lean muscles jerking convulsively on his gaunt frame, old Sledge had come to his feet from the high stool. He stood hunched and swaying, no more than a shrunken human husk, gasping painfully for life, staring wildly into the blind steel eyes of the humanoid. He gulped. His lax blue mouth opened and closed, but no voice came.

"We have always been aware of your dangerous project," the silvery tones dripped softly, "because now our senses are keener than you made them. We allowed you to complete it, because the integration process will ultimately become necessary for our full discharge of the Prime Directive. The supply of heavy metals for our fission plants is limited, but now we

shall be able to draw unlimited power from catalytic fission."

The old man crumpled, as if from an unendurable blow. "Huh?" Sledge shoot himself, groggily. "What's that?"

"Now we can serve men forever," the black thing cooed serenely, "on every world of every star." He fell. The slim blind mechanical stood motionless, making

He fell. The slim blind mechanical stood motionless, making no effort to help him. Underhill was farther away, but he ran up in time to catch the stricken man before his head struck the floor.

"Get moving!" His shaken voice came strangely calm. "Get Dr. Winters."

The humanoid didn't move.

"The danger to the Prime Directive is ended, now," it purred. "Therefore it is impossible for us to aid or to hinder Mr. Sledge, in any way whatever."

"Then call Dr. Winters for me," rapped Underhill.

"At your service," it agreed.

But the old man, laboring for breath on the floor, whispered faintly:

"No time—no use! I'm beaten—done—a fool, Blind as a humanoid. Tell them—to help me. Giving up—my immunity. No use—anyhow. All—humanity—finished!"

Underhill gestured, and the sleek black thing darted in

solicitous obedience to kneel by the man on the floor.

"You wish to surrender your special privileges?" it murmured brightly. "You wish to accept our total service for yourself, Mr. Sledge, under the Prime Directive?"

Laboriously, Sledge nodded, laboriously whispered, "I do."

Black mechanicals, at that, came swarming into the shabby little rooms. One of them tore off Sledge's sleeve to swab his arm. Another brought a tiny hypodermic to give an injection. Then they picked him up gently and carried him away.

Several humanoids remained in the little apartment, now a sanctuary no longer. Most of them had gathered about the useless integrator. Carefully, as if their special senses were studying every detail, they began taking it apart.

One little mechanical, however, came over to Underhill. It stood motionless in front of him, staring through him with

sightless metal eyes. His legs began to tremble. He swallowed uneasily.

"Mr. Underhill," it cooed benevolently, "why did you help

with this?"

He gulped and answered bitterly:

"Because I don't like you, or your damned Prime Directive. Because you're choking the life out of all mankind. I—I wanted to stop it."

"Others have protested," it purred softly. "But only at first. In our efficient discharge of the Prime Directive, we

have learned how to make all men happy."

Underhill stiffened defiantly.

"Not all!" he muttered. "Not quite!"

The dark graceful oval of its face was fixed in a look of alert benevolence and perpetual mild amazement. Its silvery voice was warm and kind.

"Like other human beings, Mr. Underhill, you lack discrimination of good and evil. You have proved that by your effort to break the Prime Directive. Now it will be necessary for you to accept our total service, without further delay."

"All right," he yielded—but he muttered a bitter reservation: "Smothering men with too much care won't make

them happy."

Its soft voice challenged him brightly:

"Just wait and see, Mr. Underhill."

Next day, he was allowed to visit Sledge at the city hospital. An alert black mechanical drove his car, and walked beside him into the huge new building, and followed him into the old man's room—blind steel eyes would be watching now, forever.

"Glad to see you, Underhill," Sledge rumbled heartily from the bed. "Feeling a lot better today, thanks. That old head-

ache is all but gone."

Underhill was glad to hear the booming strength and the quick recognition in that deep voice—he had been afraid the humanoids would tamper with the old man's memory. But he hadn't heard about any headache. His eyes narrowed, puzzled.

Sledge lay propped up, scrubbed very clean and neatly shorn, with his gnarled old hands folded on top of the spot-

less sheets. His rawboned cheeks and sockets were hollowed, still, but a healthy pink had replaced that deathly blueness. Bandages covered the back of his head.

Underhill shifted uneasily.

"Oh!" he whispered faintly. "I didn't know-"

A prim black mechanical, which had been standing statuelike behind the bed, turned gracefully to Underhill, ex-

plaining:

"Mr. Sledge has been suffering for many years from a benign tumor of the brain, which his human doctors failed to diagnose. That caused his headaches, and certain persistent hallucinations. We have removed the growth. Now the hallucinations have also vanished."

Underhill stared uncertainly at the blind, urbane mechanical.

"What hallucinations?"

"Mr. Sledge thought he was a rhodomagnetic engineer," the mechanical explained. "He believed in fact that he had been the creator of the humanoids. He was troubled with an irrational belief that he did not like the Prime Directive."

The wan man moved on the pillows, astonished.

"Is that so?" The gaunt face held a cheerful blankness, and the hollow eyes flashed with a merely momentary interest. "Well, whoever did design them, they're pretty wonderful. Aren't they, Underhill?"

Underhill was grateful that he didn't have to answer, for the bright, empty eyes dropped shut and the old man fell suddenly asleep. He felt the mechanical touch his sleeve, and saw its silent nod. Obediently, he followed it away.

Alert and solicitous, the little black mechanical accompanied him down the shining corridor, worked the elevator for him, conducted him down to the car. It drove him efficiently back through the new and splendid avenues toward the magnificent prison of his home.

Sitting beside it in the car, he watched its small deft hands on the wheel, the changing luster of bronze and blue on its shining blackness. The final machine, perfect and beautiful, created to serve mankind forever. He shuddered.

"At your service, Mr. Underhill." Its blind steel eyes stared

straight ahead, but it was still aware of him. "What's the

matter, sir? Aren't you happy?"

Underhill felt cold and faint with terror. His skin turned clammy. A painful prickling came over him. His wet hand tensed on the door handle of the car, but he restrained the impulse to jump and run. That was folly. There was no escape. He made himself sit still.

"You will be happy, sir," the mechanical promised him cheerfully. "We have learned how to make all men happy under the Prime Directive. Our service will be perfect now,

at last. Even Mr. Sledge is very happy now."

Underhill tried to speak, but his dry throat stuck. He felt ill. The world turned dim and gray. The humanoids were perfect—no question of that. They had even learned to lie, to secure the contentment of men.

He knew they had lied. That was no tumor they had removed from Sledge's brain, but the memory, the scientific knowledge, and the bitter disillusion of their own creator. Yet he had seen that Sledge was happy now.

He tried to stop his own convulsive quivering.

"A wonderful operation!" His voice came forced and faint. "You know Aurora has had a lot of funny tenants, but that old man was the absolute limit. The very idea that he had made the humanoids, that he knew how to stop them! I always knew he must be lying!"

Stiff with terror, he made a weak and hollow laugh.

"What is the matter, Mr. Underhill?" The alert mechanical must have perceived his shuddering illness. "Are you unwell?"

"No, there's nothing the matter with me," he gasped desperately. "Absolutely nothing! I've just found out that I'm perfectly happy under the Prime Directive. Everything is absolutely wonderful." His voice came dry and hoarse and wild. "You won't have to operate on me."

The car turned off the shining avenue, taking him back to the quiet splendor of his prison. His futile hands clenched and relaxed again, folded on his knees. There was nothing left to do.

This is a companion piece to "With Folded Hands." That story is pessimistic about technology and science. This one looks at the other side of the coin—which needs a look. I think too many science fiction writers have become prophets of doom. Aside from Clarke's work and the Heinlein juveniles, optimistic science fiction is hard to find.

I don't know why. Of course the Pandora Effect lends itself to pessimism. So does the organismic analogy. Disaster is always more dramatic than happiness. Despair about the hopeless "human condition" has become a fad. Yet, in spite of all that, the coin does have a brighter face.

Even in the Pandora story, there's a germ of optimism— Hope was in the box, as well as all misfortune. The organismic analogy is only a figure of speech—civilizations may be as mortal as men, but they are also lifeless historical abstractions. Peoples can survive a change of calture.

"The Equalizer" has nearly the same basic premise as "With Folded Hands"—the idea that technology can control the lives of men. The humanoids, in whatever automated shape, may at last reduce us all to cogs in a world-wide machine. But I think we are still safely short of that point of no return. Not all inventions are bad.

Ι

Interstellar Task Force One was earthward bound, from twenty years at space. Operation Tyler was complete. We had circled Barstow's Dark Star, nearly a light-year from the Sun. The six enormous cruisers were burdened, now, with a precious and deadly cargo—on the frigid planets of the Dark Star we had toiled eight years, mining raw uranium, building atomic plants, filling the cadmium safety-drums with terrible plutonium.

We had left earth in a blare of bands and party oratory. Heroes of the people, we were setting out to trade our youth for the scarce fuel-metals that were the life-blood of the Squaredeal Machine. We were decelerating toward the Dark Star when Jim Cameron happened upon the somehow uncensored fact that both uranium and thorium are actually fairly plentiful on the planets at homo, and concluded that we are not expected to return.

Allowed to test the cadmium safety-drums that we had brought to contain our refined plutonium, he found that some of them were not safe. One in each hundred—plated to look exactly like the rest—was a useless alloy that absorbed no neutrons. Stacked together in our hold, those dummy drums would have made each loaded ship a director-sized atomic bomb, fused with an unshielded critical mass of plutonium.

If jim had been a Squaredealer, he might have got a medal. As a civilian feather merchant, he was allowed to scrap the deadly drums. Under party supervision, he was permitted to serve as safety inspector until the last tested drum was loaded in our holds. He was even granted limited laboratory privileges, under Squaredeal surveillance, until we were nearly home.

But he and I, aboard the *Great Director*, spent the last months of our homeward flight in the ship's prison. Held on charges never clearly stated, we somehow survived that efficient, antiseptic SBI equivalent of torture called "intensive interrogation." Our release, like the arrest, was stunningly unexpected.

"Okay, you guys." In the prison hospital, a bored guard shook us out of exhausted sleep. "Come alive, now. You're sprung. Get yourselves cleaned up—Hudd wants to see you."

Returning our clean laboratory whites, he unlocked the shower room. The prison barber shaved us. We signed a receipt for our personal belongings and finally stumbled out of the sound-proof cell-block where I had expected to die. There were no explanations and no regrets—the Special Bureau of Investigation was not emotional.

An MP sergeant was waiting.

"Come along, you guys." He pointed his stick at the officers' elevator. "Mr. Hudd wants to see you."

"Surprising," murmured Cameron.

Mr. Julian Hudd was not an officer. He had no formal connection with either the SBI or the Atomic Service. He was merely a special secretary to the Squaredeal Machine. As such, however, he gave orders to the admiral-generals. Hudd, the rumors said, was the bastard son of Director Tyler, who had sent him out to the Dark Star because he was becoming too dangerous at home. The imitation safety-drums, the rumors added, had been intended to keep him from returning. But Hudd, enjoying himself in a secret harem installed on his private deck, the rumors went on, meant to be hard to kill.

Julian Hudd rose to receive us in the huge mahogany-andgold office beyond. At fifty, he was still handsome; he still bore a shaggy, dark-haired magnificence. Yet the enormous animal vitality of his heavy frame was visibly ailing. He was paunchy; his blue cheeks sagged into jowls; dark pouches hung under his blood-shot eyes.

"Jim! And Chad!" We were not his friends—a Square-dealer had no friends; but he made a fetish of informality. He shook our hands, seated us, offered the first cigars I had seen in many years. "How are you?"

Cameron's lean face turned sardonic.

"We have no scars or mutilations, thank you."

Hudd nodded, beaming as genially as if he hadn't hourd the sarcasm. Relaxed behind his opulent desk, he began tupping its sleek top with a paperweight, a small gold bunt of Tyler.

"You two men are pariahs." He kept his smile of bland good-nature, but his voice became taut, violent. "Civilian scientists! Your own mutinous indiscretions got you into the cells of the SBI. Except for this present emergency, I should gladly let you rot there. Now, however, I'm going to let you exonerate yourselves—if you can."

The sagging, furrowed mask of his face gave me no hint about the nature or extent of this present emergency, and we had been incommunicado in the prison. By now, I thought, we must be near the earth. I recalled the booby drums. Perhaps, it occurred to me, he intended to take over the Directorate from Tyler or his heirs.

Hudd's gray, blood-shot eyes looked at me, disconcertingly. "I know you, Chad Barstow." His fixed smile had no meaning, and his loud voice was a slashing denunciation. "Per-

haps your own record is clean enough, but you are damned by a traitor's name."

I wanted to protest that my father had been no traitor, but a patriot. For Dr. Dane Barstow had been Secretary of Atomics, in Tyler's first cabinet-when Tyler was only President of the United States. He had organized the Atomic Service, from the older armed services, to defend democracy. When he learned Tyler's dreams of conquest and autocratic power, he angrily resigned. That was the beginning of his treason.

In political disgrace, my father returned to pure science. He went out, with his bride, to found Letronne Observatory on the moon. Spending the war years there together, they discovered the Dark Star-my father first inferred the existence of some massive nonluminous body from minute perturbations of Pluto's orbit, and my mother aided him in the long task of determining its position and parallax with infrared photography.

Eagerly, Dane Barstow planned a voyage of his own to the Dark Star-he wanted, no doubt, to escape the op-pressive intellectual atmosphere of the Directorate. He spent two years designing an improved ion-drive, and then tried

to find aid to launch his expedition.

Tyler, meantime, had betrayed democracy and destroyed his rival dictators. From Americania, his splendid new capital, he domineered mankind. He was pouring billions into Fort America, on the moon, to secure his uneasy Directorate. He was not interested in the advancement of science.

Curtly. Tyler refused to finance or even to approve the Dark Star Expedition. He wanted the ion-drive, however, for the robot-guided atomic missiles of Fort America. My father quarreled with him, unwisely, and vanished into the labor camps of the SBI. My mother died in the care of a Squaredeal doctor.

Though I was only a little child, there are things I shall never forget. The sadness of my father's hollow-cheeked face. The intense, electric vitality of his eyes. The futile efforts of

my mother to hide her fear and grief from me. The terror of the SBI, that haunted my sleep.

Five years old, I was taken into the Tyler Scouts.

Task Force One, which put to space three years later, was not the supreme scientific effort of my father's planning. The great expedition, as Jim Cameron once commented, was merely a moral equivalent of war.

"Dictators need an outside interest, to divert rebellion." A tall man, brown and spare, Cameron had looked thoughtfully at me across his little induction furnace—we were working together then in his shipboard laboratory. "War's the best thing—but Tyler had run out of enemies. That's why he had to conquer interstellar space."

I looked uneasily about for possible eavesdroppers, for such talk was not healthy.

"I wonder how it worked." Cameron gave me his likeable, quizzical grin. "Since we have failed to find any interstellar enemies, the essential factor was missing—there was no common danger, to make oppression seem the lesser evil. Perhaps it failed!"

Our arrest must have come from such reckless remarks as that. Cameron had always been unwisely free of speech, and it turned out that one of our laboratory assistants had been a Squaredealer, reporting every unguarded word to the SBI.

Now, in that richly paneled office, Julian Hudd kept drumming nervously on his sleek mahogany desk. Through that bland and mask-like smile, he watched me with red, troubled eyes.

Hoarsely, I answered him.

"I know my father was a traitor, Mr. Hudd." I had learned to utter those bitter words while I was still a child in the Tyler Scouts, for they had been the high price of survival. "But I've been loyal," I protested. "The SBI have nothing on me."

"You're lucky, Barstow." His voice was flat and merciless. "One word of real evidence would have drummed you through the execution valve. Now, I'm giving you a chance to redeem your father's evil name."

Then he turned upon Jim Cameron, accusingly. A sharp unease took hold of me, for Cameron had never been broken

to mute obedience, as I had been. Now, emaciated and weary as he was from the prison, he still stood proud and straight. His fine blue eyes met Hudd's—sardonic, amused, and unafraid.

Jim Cameron had always been that way—meeting the iron might of regimented society with a cool, critical intelligence; yielding, sometimes, an ironic show of respect, but never surrendering his proud independence.

He had been my best friend since we came aboard the Great Director—two, among the thousands of Tyler Scouts who were sent to provide youthful replacements for the crews. He was fourteen then, the leader of our troop. He found me lying on my back, sick with acceleration-pressure, homesick, too, dazed and hopeless.

"Hello, Scout." He put a friendly hand on my shoulder and gave me his wry, invincible grin. "Let's get our gear

policed up for inspection."

We arranged our equipment. He sent me for a brush to sweep under our bunks. I showed him the treasures in my pocket—three model-planet marbles, a broken gyroscope top, and a real oak-acorn—and even let him see the contraband snapshot of my parents. We went to chow together. We were friends.

Now, under the provocation of Hudd's shaggy-browed, glaring vehemence, I was afraid that Cameron's stubborn self-respect would once again get the better of his judgment.

"As for you, Jim—" Hudd's blue-jowled smile was wide, his voice harsh and violent—"your record is bad. You were broken from the Tyler Scouts, for insubordination. You were blackballed from the Machine, for doubtful loyalty. You were even rejected for the Atomic Service."

"That's true, Mr. Hudd." Cameron grinned, cool and aloof.

"Feather merchant!" Hudd's red eyes glared through his mechanical smile. "The execution valve is waiting for you, Jim. Never forget that. I've saved your life a dozen times—just because you've been useful to me. Now I'm giving you a chance to earn one more reprieve. But the valve's still waiting, if you fail. Understand?"

"Perfectly," Cameron grinned, "What's the job, this time?"

He must have been thinking of those dummy drums that he had found in time to save all our lives. Perhaps he was thinking of other services, too. On the cold worlds of the Dark Star, he had been a very useful man. He had invented sensitive new detectors to find the uranium hidden under glaciers of frozen air. He had solved a hundred deadly riddles for Hudd, before the last lethal cylinder of newly made plutonium was loaded safely aboard.

"One question, first." Hudd's big mouth still smiled, but his red eyes were narrowed and dangerous. "The boys have brought me a rather disturbing report about some gadget you called an induction furnace. What's the truth about it?"

"That's easy, Mr. Hudd." Cameron's low voice seemed relieved. "Until our arrest, we were running routine assays of our metallurgical specimens from the Dark Star system. I built that little furnace just for convenience in fusing samples."

"So?" Hudd forgot to smile. His heavy, mottled face stiffened into a bleak mask of ruthless purpose. "The boys report that your assays were only a blind, intended to cover some secret experiment."

Hudd paused, but Cameron said nothing. He merely stood waiting, his lean face grave enough, but an alarming hint of impersonal amusement in his eyes. Hudd went on:

"I believe it was a most peculiar furnace." Hudd's voice was harsh with accusation. "The boys report that it consumed no current. They say it changed the metals fused in it—that buttons of pure iron, on spectrographic analysis, began to show yellow sodium lines."

Hudd's great body heaved forward against the desk, ominously.

"What about that?"

Cameron nodded easily. Then fear dropped like a staggering burden upon me. For he grinned across the gleaming mahogany, and told Hudd more than he had ever admitted to the SBI, in all our months of intensive interrogation.

"I was looking for something."

For a moment, as he spoke, Cameron let down the shield of reserved and sardonic amusement that he carried against a

world of totalitarian compulsion. For a moment his voice had a hard elation, terrible in its honesty.

"I was looking for—freedom." His thin shoulders lifted, almost defiantly. "I thought I had found a new and simple technique for manipulating the cosmic stuff that sometimes we call matter and sometimes energy. I thought I had found the way out of the Atomic Age."

His blue and deep-set eyes, for just that moment, held a stern radiance. Then his brief elation flowed away. His tall, emaciated frame bent to a burden of failure, and I saw the

gray sickness of the prison on his haggard face.

"I was mistaken." His voice went flat, with the dull admission of defeat. "The accidental contamination of pure specimens with spectroscopic traces of sodium is notoriously easy. I had already abandoned the experiment, before we were arrested."

Hudd nodded his great shaggy head, unsurprised.

"You're smart to tell the truth—and lucky that you failed." His broad, blue-jowled face recovered its habitual political smile. "Now, I think you've had a lesson, Jim, and I'm going to give you another chance." His voice turned savage again. "I don't mean another chance at treason—for you'll be watched, every minute."

Cameron stood waiting. The defeated look was gone. His lean face was properly grave, but his keen blue eyes had a glint of amused expectancy.

"What's your trouble, Mr. Hudd?"

Hudd pushed the little golden head of Tyler away from him, across the opulent desk. Slowly shifting his great bulk, he leaned back in his wide chair, knitting his fingers so that his huge, black-haired hands cradled his paunch. Under the dark thick brows, his small eyes were red with fatigue and trouble.

"I suppose you noticed when we went from acceleration thrust to centrifugal, three days ago?" His rasping voice was dry and hurried. "Anyhow, we're back—on a temporary orbit twenty thousand miles from the moon."

"And something's wrong?" Cameron's voice, it seemed to me, had some faint undertone of malicious anticipation. But Hudd didn't seem to notice, for he was stating gravely:

"Something has happened to the Directorate!"

"Eh?" Cameron's veiled amusement vanished. "What?"

"Here are the facts." Heavily, Hudd lurched forward against the desk again; his voice had a brittle snap. "We began calling Fort America weeks ago, from millions of miles at space. Our signals weren't answered. So far as we can determine, the moon has been abandoned."

His bloodshot eyes looked haunted.

"We haven't tried to signal the earth—I want to keep the advantage of surprise, until we know the situation. But things have happened, even there."

He reached, with a huge and hairy paw, for the little golden bust of Tyler and resumed his nervous drumming.

"But we've been listening, on every possible wave band. Of course, out here, we couldn't expect to get much. But we are in range of the great television propaganda stations of the Applied Semantics Authority—and they are dead. All we have picked up are feeble clicks and squeals—scrambled radiophone signals, apparently, which our engineers can't unscramble."

His lowered voice echoed a baffled unease.

"The telescopes give us several puzzling hints. The forests have grown, since we left—the spread of green into the deserts might almost indicate a general climatic change. The haze of smoke is gone from the old industrial areas. Where several cities used to be, in the tropics, we can find only green jungle."

"Very interesting," Cameron murmured.

"Two landing parties were sent to earth in life-craft," Hudd added grimly. "One was to land in Europe and the other in North America. Nothing has been heard from either, since they entered the ionosphere. They are twenty-four hours overdue."

The solemn, baffled hush of his voice gave me an uncomfortable chill. It would be a terrible and ironic thing I thought, if we had come back from our long exile to find our own human kind somehow destroyed.

Hudd blinked at Cameron with shrewd weary eyes.

"Now, I'm sending out another party." His voice turned decisive. "Captain Rory Doyle will be in command—under

the advice of my liaison man, of course—and Doyle wants you two with him. You are taking off in two hours. Your first object will be to learn what happened to Fort America."

Hudd put his great hands flat on the desk and came laboriously to his feet, puffing with the effort. For all his gross bulk, however, he made a towering figure, dynamic and impressive still. Shrewd and imperious, his small eyes burned into Cameron.

"You had better find out." With a visible effort at control, he lowered his violent voice. "Your mission is important. I believe the Directorate has been overthrown, and I intend to restore it. I've got plutonium enough to smash the earth. The first necessity, however, is to learn what has happened. I believe you can anticipate the consequence to yourselves of failure."

"I think we can, Mr. Hudd," said Cameron.

My heart began to thump, with an excited and somewhat apprehensive expectation.

II

Life-craft 18 was a trim steel missile, lying snug in its berth-tube amidships of the *Great Director*. Eighty feet long and slim as a pencil, it had its own ion-drive, a regular crew of six, and plenty of additional space for our party.

Captain Rory Doyle met us at the valves. He was a big man, red-haired, straight and handsome in the gray of the Atomic Service. Under party supervision, he and Cameron had rescued a scout ship sunk in a liquid nitrogen sea on the inner planet of the Dark Star. He was capable, fearless, and loyal to Hudd. Smiling, he welcomed us aboard his swift little craft.

His crew of able spacemen helped us stow our space armor, and made ready to launch. Our take-off time went by, while Doyle scowled at his wrist chronometer, keeping the valves open.

"Waiting for Victor Lord," he muttered. "The Square-dealer."

Only his impatient tone suggested any dislike for Square-dealers—and even that was indiscreet.

Lord came swaggering insolently aboard, twenty minutes late. He was a tiny man, very erect and precise in his gray uniform—with the gold squares of the Machine instead of the blazing atoms of the Service. He had tight brown skin over a hard narrow face, with heavy lids drooping over pale yellow eyes. His long black hair had a varnished slickness. Strutting between his two tall bodyguards, he looked like a peevish dwarf.

He didn't bother to return Doyle's correct salute.

"You know my status, Doyle." His high, nasal voice was deliberately overbearing. "My duty here is to oversee your performance of this important mission. We'll have no trouble—if you just keep in mind that one word from me can break you."

He paused to blink at Doyle, with a sleepy-lidded arrogance. Success in the Squaredeal Machine required brutality, and Lord, I knew, stood second only to Julian Hudd. Haughtily, he added:

"You may take off, now."

"Yes, Mr. Lord."

The Squaredealer's petulant insolence may have been nothing more than a compensation for his size, but still I didn't like him. His yellow eyes were shifty; his narrow forehead sloped and his nose was too big; his whole expression was one of vicious cunning.

Doyle turned quickly away, perhaps to conceal his own resentment. He ordered the valves closed and climbed the central ladder-well to his bridge. A warning-horn beeped, and we cast off.

In the acceleration-lounge, we hung weightless for a few seconds as we dropped away from the flagship; then the thrust of our own ion-drive forced us back into the cushions with a 2-G acceleration.

I turned in the padded seat to look back through a small port. Against the dead black of space, I glimpsed the enormous bright projectile-shapes of the *Great Director* and the *Valley Forge*—coupled nose-to-nose with a long cable, spinning slowly, like a toy binary to create an imitation gravity.

Earth, close beside them, was a huge ball of misty wonder. The twilight zone made a long crimson slash between the day-side and the night. Dull greens and browns and blues were all patched with the dazzling white of storms.

All the hope and longing of twenty years burst over me when I saw the earth, in a sudden flood of choking emotion. My wet eyes blurred that splendid view. I sat grappling in vain with that shocking mystery of spreading forest, abandoned farmlands, and jungle-buried cities, until Victor Lord's high nasal voice recalled me to the life-craft.

"Feather merchants, huh?" Sitting pygmy-like between his two husky guards, Lord turned condescendingly to Cameron. "But Hudd insisted you must come. Let's have your ex-

pert opinion."

He stressed the adjective too strongly, but Cameron answered quietly, "I rather expect we'll find the ultimate result of what the old economists used to call the division of labor."

At the time, I failed to see the real significance of the interchange that followed, though it proved the key to much that happened later. I was merely annoyed at Cameron, and increasingly alarmed, because his talk plainly angered Lord.

"Explain!" Lord rapped.

"If you like—though I'm afraid the historical principle runs counter to Squaredeal ideology." Cameron was a little too grave. "Because I don't believe the Directorate was created by Tyler's unique statesmanship, or even by the emergent dictatorship of the common man. It was, I think, just one of the end-products of the division of labor."

Lord blinked his beady eyes, apparently uncertain whether this was double-talk or high treason. I kicked Cameron's foot, vainly trying to keep him quiet.

Explain yourself," Lord commanded.

"Nothing to it," Cameron said. "The division of labor was hailed as something wonderful—before its unpleasant final consequences came to light. One man made arrows, another hunted, and they both had more to eat. That was very fine, back in the stone age."

Cameron stretched out his legs, cheerful and relaxed.
"But it went a little farther, in the modern world. Division of labor divided mankind, setting special interest against the

common good. It made specialists in mining coal, in scientific research—even in political power, Mr. Lord. The specialists formed pressure groups, each fighting to advance its own class interest—with weapons incidentally created by that same division of labor.

"When specialists fight, the winners are apt to be the experts in war," Cameron continued innocently. "Thus government becomes a function of military technology, which of course derives from the basic industrial technology. The prevailing form of government, therefore—dictatorship or democracy—depends on the current status of the division of labor. That interesting relation of technology and politics was pointed out by the old philosopher, Silas McKinley."

Lord's sleepy eyes glittered suspiciously.

"He's forbidden! Where do you keep such pernicious literature?"

Cameron grinned. "Once I had permission to do some research in Mr. Hudd's very excellent library."

"You're apt to suffer for the dangerous ideas you acquired there," Lord commented acidly. "Now what's this nonsense, about technology and government?"

"Political power reflects military power," Cameron cheerfully explained. "When war is fought with cheap, simple weapons, easy for the amateur to use, then the military importance of the ordinary citizen is reflected in his political freedom. Democracy in America was established by the flint-lock and maintained by Colt's revolver.

"But democracy is always threatened by an increase in specialization, especially military specialization. When weapons are expensive and complicated, requiring a class of military experts, then the ordinary man can't defend his rights—and he therefore has no rights.

"Democracy was murdered, on a desert in New Mexico, in 1945. Already, for a hundred years, the increasing division of labor had been forcing it into slow decline. The same specialization that created the bomber and the tank had already reduced the free citizen to a pathetic little man at the mercy of the corporation manager, the union leader, and the party bureaucrat.

"The atom bomb was the end of freedom. Because it was

the final limit of specialization. The most complicated and costly weapon ever, its production required a fantastically complex division of labor. Government followed the trend of technology, and totalitarian control destroyed the individual."

Sitting half upright in the long reclining chair, Cameron

gave the little Squaredealer his wry, sardonic grin.

"Tyler thought he had conquered the world," he concluded. "But really it was just division of labor that created the new technology of atomic war, and so destroyed the whole world's freedom. It was just the trend of specialization that made the Directorate and flung Tyler to the top of it—no more responsible than a pebble flung up by a wave."

Pressed deep in the cushions, Lord sat peering back with confused suspicion in his yellow eyes. Fortunately for Cameron, he was now concerned with dangers more immediate than ideological heresy. His nasal voice rasped angrily:

"Well? What happened then-according to your theory?"

Cameron answered with an easy grin.

"Quite likely, the division of labor broke down at last."
"Watch your manner, Mister." Lord clearly didn't like his grin. "What could break it down?"

"Rebellion, perhaps." Cameron was properly respectful. "For America had a permanent garrison of nine thousand specialists in death. They were prepared to devastate any part of the earth—or all of it. Perhaps they were just too thorough."

Uneasily, the little Squaredealer licked his thin lips.

"Then why should the fort itself be silent?"

"Disease, perhaps—some biological weapon out of control." In Cameron's blue eyes, I caught a faint glint of malicious amusement. "Or famine—maybe they left the earth unable to feed them. Or natural cataclysm."

Lord fought the acceleration-pressure, to sit bolt upright. His bleak narrow face was filmed with sweat of effort—and of fear.

"Cataclysm?" He peered into Cameron's lean, sardonic face. "Explain!"

"Twenty years at space has shown us the insensate hostility of the universe." Cameron's low voice deepened my own unease. "Man lives at the mercy of blind chance, surviving only

through a peculiar combination of improbable factors. Just suppose we find the earth stripped of oxygen." He grinned at Lord, satanically. "As efficiently as the planets of the Dark Star were robbed of uranium?"

Before we reached the moon, Lord had turned a sallow green with acceleration-sickness.

Fort America was hidden beneath a crater in the tawny desolation of the Mare Nubium. We wheeled above the mountain ring, just above the highest crags, searching the dozen miles of barren floor.

"It hasn't changed!" I whispered to Cameron. "The valves, the roads, the docks—just as they used to be!" I tried to point through the small quartz port. "There's where the Great Director stood."

"But it has changed." Cameron glanced at me; and the strong glare of the moonscape, striking his haggard face from below, made his habitual sardonic expression seem oddly diabolic, "It's abandoned, now."

And I remembered. Great trucks once had rolled over that white web of roads. Colored signal lights had blinked and flickered from the domes over the pits. Tall, tapered ships had stood like rows of silver pillars on the immense, dark fields.

But now the crater was an empty bowl. The lowering sun made all the westward rim a jagged lip of shattered ebony. Sharp fingers of the dark crept across the empty miles, to clutch the empty domes and seize the empty roads.

Nothing moved, anywhere. No metal flashed beneath the sun. No signals flickered, now, out of the cold, increasing shadow. Men had been here once, armed with atomic science, bold with conquest. Now they were gone.

Yet the crater wasn't empty, quite—for it held a riddle. What had silenced man's greatest citadel? Cold dread sank into me, out of that black, expanding shadow. The brooding mystery of it numbed my senses like some spreading biotoxin.

We landed at last, well out in the retreating sunlight, on a concrete road near one of the valves. We clambered into space-armor—Cameron and I, and Captain Doyle. Laden with assorted equipment, we scrambled one by one through

the small air-lock, leaping clumsily down to the moon.

Victor Lord remained aboard. He was ill. I believe his apprehensive thoughts had fastened too strongly on Cameron's malicious suggestion of interstellar invasion. I think he expected us to encounter unearthly monsters lurking down in the pits and tunnels.

Beside the bright spire of the life-craft, we set up a portable radiation counter and a neutron detector. The counter started flashing rapidly, and I couldn't stop an apprehensive

gesture toward the valves.

"Dangerous intensity!" My voice rang loud and strange in the spherical helmet. "The residue, maybe, from atomic weapons—though I don't see any craters."

But Cameron was shaking his head, which looked queerly magnified inside the thick, laminated bubble of his helmet.

"Just the normal secondary activity, excited by our own ion-blast." His voice came on the microwave phone, dulled and distorted. "I think it's safe for us to go on."

Moving clumsily with all our equipment, we moved a hundred yards to try again. Now the counter showed only the normal bombardment of solar and cosmic rays.

"Come along!" Doyle's deep voice roared in my phones. "Have a look—here's a whole row of wrecks. The mutineers must have caught them sitting. They're blown all to scrap."

Beside a huge deserted dock of gray pumice-concrete, he had discovered the dismembered remnants of half a dozen vessels. We approached cautiously, and paused again to test for dangerous radiations. There were none—for these skeletons of space-craft had been stripped by something other than mutiny.

This had been a repair-dock. Suddenly sheepish, Doyle pointed at abandoned cranes and empty jet-pits. The apparent wrecks had merely been cannibalized—their plates and valves and jets ripped out to repair other vessels.

"No mutiny!" Doyle made a disgusted sound. "Let's look below."

For the actual fort was far beneath the crater. A vast web of tunnels, sheltered hangars, shops, barracks, magazines. The launching tubes, trained forever on the earth,

were hidden in deep pits. Somewhere in that sublunar labyrinth, we could hope to find our riddle answered.

The nearest entrance shaft was topped with a low dome of concrete, piled with pumice boulders by way of camouflage. The great armored valve was closed, unrusted, quite intact. Doyle spun a bright little wheel, outside.

"I was stationed here, before they picked me for the task force." he said. "A robot-missiles officer-used to know my

way around."

The massive steel wedge failed to move, and Doyle turned to another, larger wheel. It resisted, and I came to help. Stubbornly, it yielded. The great wedge sank slowly.

"Power's off." Doyle was breathless with effort. "Manual

emergency control!"

We shuffled at last into the huge dark chamber of the lock. Our battery lights cast flickering, fantastic shadows. Peering at a row of dials and gauges on the curved steel wall, Dovle punched a series of buttons.

Suddenly I felt a faint vibration. The huge wedge lifted behind us, shutting out the dark and harsh-lit moonscape. The chamber was a steel-jawed trap. I felt a tense unease,

and the sudden boom of Doyle's voice startled me.

"The main power lines are dead. That's an emergency generator, with a chemical engine-there's one at each valve, to work the controls and energize the instruments." He scanned the dials again. "Air inside-seven pounds. Better test it."

When he turned another wheel, air screamed into the chamber. It brought back sound-the clink of our equipment, the clatter of our armored boots, the throb of the emergency engine beneath the metal deck.

We tested it. The counter gave only an occasional click and flash. I broke the glass nipple off a regulation testing tube, and Cameron leaned clumsily beside me to study the reaction of the colored paper indicators.

"Okay," he said. "Safe."

We took off our armor. The air was fresh, but icy coldwe exhaled white mist. Hopefully, Doyle tried the telephone in the box beneath the dials. Dead silence answered him. Shivering-perhaps to a sense of something colder than the

freezing air—he hung it up and opened the inner valve. The emergency power system didn't work the elevators. We climbed down a black ladder-well, into the silent citadel.

Ш

Fort America was dead.

The thrumming of the little emergency engine was muffled, as we climbed on down, and finally lost. We descended into appalling silence. So long as we moved, there was a comfortable rustle and clatter. When we stopped to listen, there was nothing at all.

Everywhere, power lines were dead. Midnight shadows retreated grudgingly from our little battery lamps, and lay in wait at every turning. Beyond was total dark.

The heating system must have been shut off, months or years before, for the cold was numbing. Sweat had dampened my wool lined suit, in the heated armor, and now it was icy on my back. The chill of the rung sank through my thin gloves; my fingers were stiff and aching long before we reached a horizontal passage.

Gruesome expectations haunted me. I looked for frozen corpses, twisted with agony from quick biotoxins, or charred with atomic heat. Queerly, however, we found no mark of violence, nor any evidence of human death.

"They're just—gone!" Even the deep voice of Captain Doyle held a certain huskiness of dread. "Why—I can't imagine. Nothing wrong, no sign of any trouble." He caught his breath, squared his shoulders. "We've got to find the answer. Let's try the commandant's office."

He led the way along a black and soundless lateral tunnel, and opened an unlocked door. The series of rooms beyond was deserted—and quite in order. Empty chairs were neatly set behind the empty desks. Dead telephones were neatly racked in their cradles. Pens in their stands were neatly centered on green blotters, with the ink dried up.

Doyle rubbed a dark mark in thin gray dust.

"They've been gone a long time." His voice seemed oddly hushed, yet too loud in those silent rooms.

I began to open the drawers of desks and filing cabinets. They were empty. Bulletin boards had been stripped, floors swept clean. Even the wastebaskets had been neatly emptied.

A large portrait of Tyler in the commandant's office had slipped askew on the wall. Doyle moved without thinking to set it properly straight. Cameron followed his movement, I noticed, with a curious sardonic expression, but silently.

"The evacuation must have been quite orderly." Doyle shook his head, his eyes dark with bewilderment. "No sign of haste or panic. Now what could have caused them to go?"

We moved on, in search of the answer.

It wasn't famine. We walked through an empty mess hall. The long tables were all in line, filmed with dust. Clean trays and silver lay in geometric order, where the last KP's had left them for the last inspection. The warehouse beyond was stacked high with crates and bags and cans of food, frozen now, still preserved.

Nor was it any biological killer, gone wild. We found hundreds of beds in a hospital tunnel, empty, their dusty sheets still neat and smooth. The pharmacy shelves were loaded with drugs, untouched.

"Power failure?" Cameron suggested. "If the pile had gone dead..."

Rory Doyle found the way, down a black and bottomless ladder-well, to the main power-pile. The massive concrete safety-wall shut us away from all the actual mechanism, but Cameron scanned the long banks of recording instruments and remote controls. He flashed his light on a distant conveyor-belt, motionless, still laden with bright aluminum cans.

"Nothing wrong," he said. "The last operator discharged the pile—dumped the canned uranium out of the lattice, into the processing canyon underneath. There's plenty of

metal left, but it wasn't charged again."

On another black and silent passage, a little above, we came to the steel-walled dungeons of the guardhouse and the military prison. The armored doors stood open. The records had been removed. The prisoners were gone.

"Revolt, perhaps," Doyle suggested. "Perhaps the prisoners escaped, and touched off a mutiny in the garrison-no,

that couldn't have been, or we'd see the marks of fighting. Perhaps it was revolution, on the earth. That might explain everything—if the missiles are used up."

He led us up again, along an endless silent tunnel, and down another dark ladder-well. We spun stiff wheels to open three heavy safety-doors, and came at last into one of the magazines.

Dovle gasped, in blank astonishment.

For on row, as far as our lights could reach, long racks were loaded with the robot-missiles. They were sleek cylinders of bright metal, gracefully tapered, every part of them beautiful with precise machining. Space ships, really, they were six feet thick and sixty long, each powered with its own atomic generator, driven with its own ion-jets, controlled with the fine and costly mechanism of its own robot-pilot, each burdened with its own terrible cargo of plutonium-fused lithium hydrides or crystalline biotoxins.

Stunned, almost, Doyle walked to the nearest. He examined it expertly, lifting inspection plates, flashing his light on serial numbers. He came slowly back to us, baffled.

"All abandoned!" he muttered. "I can't believe it. Why, those babies cost twenty million apiece, even in mass production. They are loaded with the finest precision machines that men ever made. One of them, in forty minutes, could obliterate a thousand square miles of earth. And never a one was fired!"

We climbed again, up a black narrow shaft, to the launcher which Doyle had once commanded. Bright, satiny metal shimmered against our lights. The huge vertical barrel cast monstrous, leaping shadows. Doyle slipped into a familiar seat and touched familiar buttons. An emergency engine began drumming. A huge periscope lens was suddenly bright with the broad crescent earth—with thin black cross hairs intersecting upon it.

He flashed his light on a blank log-sheet, and shook his head.

"Never a missile was fired."

Cameron was whistling through his teeth—a gray bit of melody that made a grotesque counterpoint to the themes of

lifeless quiet and ghastly dark and deadly cold, to the whole haunting riddle of the abandoned fortress.

"Are these weapons still serviceable?" he asked.

"Not without some missing parts." Doyle opened an inspection door, to show a dark cavity. "The computer has been removed, and the gyros are gone from the projectiles."

"Too bad." Cameron's voice held the hint of irony. "I

imagine Mr. Hudd is going to need them."

"They can be repaired," Doyle assured him soberly. "Our spares for the ships' launchers are interchangeable." Doyle looked at his chronometer. "Now it's time to report to Mr. Hudd-that our mission has failed."

The stern simplicity of the life-craft, when we were safely back aboard, seemed luxurious. We relaxed in the acceleration chairs and gulped hot soup against the chill of those abandoned tunnels while we answered the peevish and uneasy questions of little Victor Lord.

When the signal officer reported that he had contact with the Great Director, we crowded into the narrow television room. Hudd's heavy, blue-wattled face filled the screen.

"Let's have it, Jim." His loud, hearty voice was edged with tension, "What happened to the fort?"

"Evacuated, Mr. Hudd."

"But why?"

"We failed to discover that," Cameron reported. "The withdrawal was deliberate and orderly. The records were mostly removed or destroyed: the weapons were disabled without unnecessary destruction; the men took their personal belongings. There's no evidence whatever of trouble or violence."

"When did it happen?"

"About two years, I think, after the task force left. The dates on calendar pads and inspection cards show that men were here that long. The lowered air pressure, the accumulated dust, and the low counter readings we got about the main power plant-everything shows that they weren't here much longer.'

Hudd turned, on the screen, to rap a few questions at Doyle and Lord. Lord's uneasy insolence had changed to a silky deference, now. He explained that acceleration sickness had kept him on the life-craft.

"A very puzzling situation." Hudd's frown showed his bewildered apprehension. "The entire task force, I feel, is in danger, until we find out what happened."

He straightened on the screen.

"Captain Doyle, you will proceed at once to the earth. You will land at Americania. Discover what happened to the Directorate—and what enemies we must destroy, to restore it. Take any precautions that you think necessary. But this time you must not fail."

"Yes, Mr. Hudd."

Hudd answered his smart salute, and looked at Lord. "You, Mr. Lord, had better get well."

IV

Our life-craft, next day, spiraled slowly down over Americania—the splendid capital city which Tyler had founded, sentimentally, upon the Midwestern farm where he was born. Peering down through the ports, we felt an increasing sense of fearful puzzlement.

Wide suburban areas had been devastated by explosion or fire, so long ago that lush green forest had now overspread the blackened walls and the twisted frames of rustred steel—but most of the city looked intact.

Avenue upon avenue, proud towers stood like monolithic memorials to history's greatest empire. Tyler had commanded his architects to build for a thousand years. Americania was a city of granite—of gray colossal masses, pillared and towered with contrasting red granite, and purple, and black.

Far below us, those stately avenues looked strangely empty. Nothing moved. Tall stacks rose from power plants and industrial buildings in the green-choked suburbs, but there was no smoke.

Was Americania all abandoned, like the moon?

Fear of that sent an uncomfortable prickling up my spine. I looked hopefully at my companions. Little Victor Lord had turned a sallow gray, and sweat made dark blots through his shirt. His two SBI men, in their ominous black, had turned

away from the ports; muttering together uneasily, they were inspecting the action of their automatics.

Jim Cameron swung from his port, whistling in a way he had, softly, through his teeth. The air was the light, lilting melody of an old love song. The dwarfish Squaredealer whirled on him, in a sudden, tight-lipped fury.

"Stop your impudent whistling!" Lord's wrath had its real origin, no doubt, in his own frightened bafflement, but his sleep-lidded eyes looked dangerous. Even after Cameron

stopped the whistling, Lord was not appeared.

"Look at me, you feather merchant." Lord's sharp nasal voice was angrily insolent. "Frankly, I don't approve the confidence that Mr. Hudd has placed in you. Now I'm warning you—watch your step!"

His small quick hand hovered suggestively over the heavy

automatic sagging at his hip.

"Whatever we find here," he snarled, "my duty is to assure your continued loyalty to the Squaredeal Machine. Whatever happens, just remember that."

"I'll keep it in mind, Mr. Lord," Cameron promised him evenly.

Captain Doyle set the life-craft down at last on Tyler Field—the immense space-port on the outskirts of the city. Once it had been the gateway to the planets. I could remember my childish awe at the rush and glitter and vastness of it, from twenty years ago—when we marched across it, bravely screeching out the Tyler song, on our way out to Fort American and the Dark Star. Now, when I saw it again through the small ports of the life-craft, the change made me almost ill.

Like Fort America, the space-port seemed abandoned. Here, however, weather and decay had kept at work. Green life had kept on, overflowing every plot of soil, bursting from every crack in the neglected pavements.

Long rows of shops and warehouses stood deserted. Doors yawned open. Neglected roofs were sagging. Ruined walls, here and there, were black from old fire. Every building was hedged with weeds and brush.

Far across the shattered pavements stood the saddest sight of all. A score of tall ships stood scattered across the blast-

aprons, where they had landed. Though small by comparison with such enormous interstellar cruisers as the *Great Director*, some of them towered many hundred feet above the broken concrete and the weeds. They stood like strange cenotaphs to the dead Directorate.

Once they had been proud vessels. They had carried the men and the metal to build Fort America. They had transported labor battallions to Mars, dived under the clouds of Venus, explored the cold moons of Jupiter and Saturn. They had been the long arm and the mighty fist of Tyler's Directorate, the iron heels upon the prostrate race of man.

Now they stood in clumps of weeds, pointing out at the empty sky they once had ruled. Red wounds marred their sleek skins, where here and there some small meteoric particle must have scratched the mirror-bright polish, letting steel go to rust, which, in the rains of many years, had washed in ugly crimson streaks down their shining sides.

One of them had fallen. The great hull was flattened from the impact, broken in two. Steel beams, forced through the red-stained skin, jutted like red broken bones. The apron was shattered beneath it, so that a thick jungle of brush and young trees had grown up all around it.

Captain Rory Doyle came silently down his ladder from the bridge. His square face was black with gloomy puzzle-

ment-as any loyal spaceman's should have been.

"A graveyard," he muttered, "of fine old ships—my first training voyage to Mars was on the old *Paul Jones*, yonder." He turned sadly to us. "Gadgets ready, Mr. Cameron? Then let's go out and see what unholy thing has happened to them."

"Hold on, Doyle!" Lord's nasal voice was sharp with dread. "Shouldn't we test the air? Suppose something has hap-

pened to the atmosphere?"

Doyle turned to Cameron, red brows lifted.

"I don't think it's necessary, Mr. Lord," Cameron said respectfully. "You can see a gray squirrel scolding at us from the tree growing out of the apron, yonder, and a buzzard circling, toward the city. I think the air's all right."

"I'll do the thinking." The little Squaredealer drew himself up stiffly, in the sweat-blotched uniform. "Test it."

I found a test-flask, and took it down to draw a sample

through a tube in the inner valve. Cameron watchfully checked my reading of the colored indicators.

"It's safe enough, Mr. Lord," he reported crisply. "Oxygen normal. A bit of secondary radioactivity—due to our jets. No detectable toxic agents, chemical or biological."

"Then we're going out." Doyle looked thoughtfully at Cameron and me. "I don't know what we're running into. If you wish. I'll issue you arms."

"No, you won't!" The little Squaredealer barked out that sharp protest. "These men are suspected mutineers, Doyle. I'll take no chances with them."

Doyle's square jaw slowly hardened.

"Mr. Lord," he began. "I believe the SBI found nothing—"
"It doesn't matter, Captain," Cameron broke in. "We've
gadgets enough to carry. Anyhow, I doubt that a pistol would
be much use, where Fort America failed."

Lord looked at him with a puzzled alarm in his sleepyseeming eyes, and then muttered something to his two gunmen. Their uneasy eyes went to Cameron.

Doyle led the way down the ladder-well. Air hissed, and the valves clanged open. One by one, we stooped to follow him through the lock and jumped out between the shining stabilizers to mother earth.

We hurried away from the scorched concrete and smoking weeds about the little ship, where the ion-jet might have left a dangerous activity, before we stopped to catch our breath.

Earth! We had dreamed of it for twenty years. Here in the northern hemisphere, it was early summer; the sky was a wondrous milky blue, flecked with cottony cumulus. The forenoon sun struck with a hot, welcome force. The warm air was heady with a fragrance that stirred old memories—the rich strong smell of green life growing out of damp vegetal decay. I heard a heavy buzzing, half-remembered, and saw a bumble-bee.

The warm earth, alive—and a lone black bird, yonder, wheeling over an empty city.

Lord, running after us through the blackened weeds, let out a nasal yelp of horror. A white skull, which he had stumbled against, rattled and bounded before him. We

found the rest of the skeleton, with a rust-caked revolver on the broken concrete beside it. Scraping about in the weeds, we discovered several shapeless lumps of heavy metal, dark from heat, and a bent penny that still showed Tyler's profile. Cameron found the flattened cases of several ruined watches, and a woman's diamond bracelet, the links half-fused and the stones burned black. Doyle picked up a wicked-looking stainless steel blade, its haft rotted away.

"A curious lot of loot." Cameron stood up, puzzled. "All burned, the money melted down. Maybe he was struck by

lightning. Or maybe looting just isn't cricket."

Lord stood off and fired a bullet into the skull, I suppose just to test his gun. Bone shattered into white dust. He holstered the automatic with an air of uneasy satisfaction, mopped the sweat off his narrow sallow face, and followed us watchfully.

We went on to the nearest ship. The bright curving hull towered three hundred feet, marred with long vertical streaks of rust. It was a stubby freighter; Doyle said it had been in the Martian metal trade.

We followed Doyle up a rusty accommodation ladder into the lock. The inner valve was closed, stiff with rust. We strained and hammered at the manual wheels until it groaned reluctantly open. A stale breath met us as we stumbled through the lock into dusty dark.

There was no power for lights or elevators. The interphone system was dead. We probed the silent dark with flashlights, and Doyle led the way up the ladder-shaft beside the elevator. Lord, with his two gunmen, decided to remain below. Doyle climbed into a cargo hold, and cursed in breath-taken astonishment.

"Plutonium!" A bewildered awe hushed his voice. "Hundreds of tons of refined plutonium in cadmium drums—enough to blow up half America—worth hundreds of millions." His haunted eyes peered back at Cameron. "Why did they leave it?"

We climbed on, looking for the answer. Our feeble lights, as we passed, searched each dark compartment. Everything was left in order. The galley was clean. The atomic generator had been discharged and secured.

There were no other skeletons.

A hard climb brought us to the executive deck. We found dusty charts and orbit plots neatly folded, astrogation instruments safe in their racks. Doyle opened an unlocked safe, with a shout of trimph.

"Now we'll know-here's the log."

He fumbled with the yellowing pages. Eagerly, we leaned to read the brief, routine entries which described an uneventful voyage from Mars. The four-hourly observations and computed positions were neatly entered, and the hourly checks of solar position and diameter. The date of the final entry corresponded with the dates on the calendar pads at Fort America. It was brief, neatly written, and completely exasperating:

"Routine landing at Tyler Field. Ship abandoned today,

because of equalizer."

That was all.

"I don't get it." Doyle shook his head, staring bleakly at that yellowed page. "A spaceworthy ship. Competent officers, evidently, and a loyal crew. They make a routine voyage and a routine landing. Not a hint of anything unusual."

He peered up at Cameron.

"Then something happens," he muttered. "Something makes them walk off and leave their jobs and their duty and a ship and cargo worth hundreds of millions. I just don't get it."

We went back to move the life-craft nearer the deserted city. When we landed again, in a suburban area which had been seared and flattened by some tremendous blast, the counter showed a lingering trace of secondary activity in the blobs of fused debris.

"An atomic explosion," Cameron decided.

"But not one of our standard robot-missiles," Doyle added.
"One shot from my launcher at Fort America would have leveled a hundred times this space."

We moved again, to a street in a still-standing suburb of detached, walled villas. Here, Doyle said, prominent officials of the Directorate had lived in an exclusive colony. He set the life-craft down on a bit of unshattered pavement that

made a clearing in the brush. Frowning walls faced the street, overgrown with green vines now, brilliant with blue morning-glories where the sun had not yet struck.

A tall gate of ornamental bronze sagged open before the nearest building, and we pushed in through a tangle of long-untended shrubbery that had overgrown the lawns. An unlocked door let us into the mansion, and musty silence met us.

Here we found no hint of any popular uprising against the ruling class. No bullet-prints, no human bones, no smashed furniture, no looted safes and chests. The refrigerator in the great kitchen had been emptied, but long shelves were filled with fine cut-glass and ornamental china. The gloomy library held thousands of volumes—but empty spaces seemed to say that others had been taken. Closets were hung with moth-ravaged clothing. A wall safe stood open, and Doyle explored the paper in it with a frown of dull bewilderment.

"They left a fortune," he muttered incredulously. "This man—His Excellency, A. P. Watts, Director-General of West Africa—must have been a lifetime piling up these stocks, annuities, bonds and shares, insurance policies, deposit receipts. Then something happened. He just walked off and left it all."

His eyes appealed to Cameron.

"I don't understand it." The spectre of dread haunted his voice. "They weren't killed—there would be more skeletons. They weren't even frightened—they didn't barricade their doors, or fire a gun, or even upset the furniture. They just set things in order, took a few useful items—and went away."

His voice fell to a whisper of dull wonderment. "But why—and where—could they have gone?"

We moved the life-craft again, this time into what had been an exclusive shopping district, where once, I fancied, the great men of the Directorate must have bought jewels and furs and perfumes for their mistresses, their secretaries, and perhaps even for their wives.

The street doors of these glittering shops were generally unlocked, or left wide open. Many shelves were bare, as if the goods had been simply carried out, but there was little

evidence of vandalism or violent looting. Unbroken windows still held garish displays of tarnished costume jewelry. Abandoned cash registers were still stuffed with currency and coin—from which I saw Lord's gunmen furtively filling their pockets.

We landed next in the middle of the city, in the wide empty canyon of Tyler Avenue. There the massive granite walls were hushed and dead, but green weeds were pushing from every crevice in the hot pavements. A few sparrows were quarreling noisily about a window ledge.

"This was Squaredeal Square." Doyle's voice seemed too loud, in that sun-beaten silence. "If there was any fighting—

war-or rebellion-we ought to find the traces here."

Peering up at those splendid dead facades, I remembered that I had been here once before—in a great jamboree of the Tyler Scouts, when I was seven. There was Squaredeal Hall. There was the purple granite balcony where Tyler—or perhaps it was one of his public doubles—had appeared as we marched by, waving his arm mechanically as we screamed out the Tyler Song.

A diamondback, lazily sunning on the black granite steps of Squaredeal Hall, greeted us with a warning whir. Lord whipped out his automatic with a nervous expertness and shot it through the head.

The crash of his shot shattered that hot silence. It thundered back, appallingly magnified by those sheer granite cliffs. The dwarfish Squaredealer and his guards crowded apprehensively together, and we all listened uneasily. But the echoes faded unanswered; the dead city was not aroused.

Doyle led us up the steps, past the dead diamondback. Voiceless with awe, we went on between the immense square columns beyond. Here was the shrine of the Directorate. Tyler had surrounded his birthplace with a colonnade of purple granite, more majestic than Karnak.

Memory stirred again. After that review and jamboree, as a personal gift from Tyler, each Scout had received a picture post card of the shrine. The little weatherbeaten farmhouse was shown beneath the towering columns, surrounded with an old-fashioned garden of zinnias and gladioli. The stone spring-house had been restored. The old appletree, which

the Director used to climb, was pink with blooms in the picture.

But that historic tree was dead, now. The house had fallen in. The mighty purple columns rose out of a green sea of weeds and sprouts and brambles. Wild morning-glories had buried the old spring-house. Something moved in the brush, and we heard the vicious warning hum of another diamondback.

Beside the useless elevator, we climbed a narrow stair. Tyler's own door, between two empty guard-boxes, had been left unlocked. We walked into the abandoned splendor of the Director's own apartment—and found no trace of violence.

On the high wall behind his desk, and the office chair that had served him for a throne, a faded tapestry still hung, intact and undefiled, embroidered in gold with the three linked squares of the Machine.

The massive door of a huge fireproof safe swung carelessly open. Its compartments were stuffed with documents marked RESTRICTED or CONFIDENTIAL or TOP SECRET. Letters, reports, beribboned executive decrees—the state papers of the Directorate, left heedlessly behind.

Lord, with a shrill excited shout, discovered a pile of heavy cloth bags that had been buried under the dusty documents in the bottom of the safe. Feverishly, he ripped one of them open, spilling out bright golden double-eagles.

"Millions—left behind!" Wide awake, for once, his eyes glittered yellow as the metal, and his thin nasal voice was hushed with awe. "There must have been a dreadful panic, to make them leave the gold."

But Cameron pointed quietly to several empty compartments, and a blackened metal wastebasket, on the end of the desk, nearly full of gray ashes.

"It wasn't panic, Mr. Lord," he said respectfully. "Tyler had plenty of time to burn the papers he wanted to destroy. Then, I should imagine, he just walked out."

The little Squaredealer peered up at him, bewildered and visibly afraid.

"But why? Tyler wouldn't give up the whole Directorate." The faded luxury of the great rooms gave us no answer.

The paneled walls showed no marks of bullets. The dusty rugs showed no stains that could be blood. The Director's great bed, under its coverlet of dust, still was neatly made.

Doyle came back to Cameron, muttering the question

that haunted us:

"Where could they have gone?"

Cameron rubbed his lean jaw with a brown forefinger. "Let's try the country," he said thoughtfully.

Doyle stared at him, blankly. "Why?"

"People used to live in cities for certain reasons," Cameron said. "Just as they worked for great corporations, or enlisted in the Atomic Service, or joined the Squaredeal Machine. Perhaps those reasons changed."

Lord blinked sleepily.

"You had better watch your tongue," he warned sharply. "I believe you read too much in Mr. Hudd's library. I'll be compelled to report your dangerous views."

But we returned to the life-craft. Doyle landed it again, outside Americania, where a disused highway made a narrow slash through woods and thickets. We climbed down between the stabilizers once more, and Cameron pointed suddenly.

Planted in the middle of the old road behind us was a signpost. It carried a yellow-lettered warning:

DANGERI

Metropolitan Areas

v

Gathered in a puzzled little circle, we examined that sign. "Well?" Doyle looked at Cameron.

"A remarkably strong aluminum alloy." Thoughtfully, Cameron rubbed his lean brown chin. "An excellent vitreous enamel. Evidently it was made and set up after the city was abandoned—to keep people out."

He started whistling gayly through his teeth, but Lord scowled him into silence. His blue eyes had lit with a specula-

tive eagerness.

"And so?" prompted Doyle.

"Interesting implications." Cameron counted on lean brown fingers. "One, there are people. Two, they possess a high grade metal-and-enamel technology. Three, they have sufficient social organization to post public signs. Four, they don't like cities."

His eager eyes peered beyond the silver pencil of the lifecraft, down the dark leafy tunnel of the old road. He softly whistled another lilting bar, and then looked quickly back at Doyle.

"Let's take off again, Captain," he suggested. "And follow the road, flying low. I think we'll find the sign-posters."

"We'll do that-" Doyle began, but the little Squaredealer

interrupted him sharply:

"I'm in charge, and I don't agree." Lord's nasal tone was both insolent and apprehensive. "The jets are too bright and noisy. We'd be seen—maybe killed from ambush. Don't forget that melted money. No, we'll leave the craft hidden here, and go on foot."

Doyle's red head nodded soberly.

"A wise precaution, probably," he agreed. "We'll carry a radiophone, so we can call back."

Leaving the bright craft hidden among the trees, we started cautiously down the green tunnel. Interlacing branches usually hid the sky. Vines and ferns made thick walls on either side. Jays scolded at us, and unseen things rustled in the brush. Once we came upon a red deer. It stood quite motionless in a little glade ahead, antlers high, until Lord clutched for his automatic; then it bounded noisily away.

We were all, I think, keyed up and uneasy. The gloom of the forest darkened my own thoughts. Imagination turned small rustlings into startling threats. Recalling that the two other landing parties were long overdue, I began to wish I had a gun.

Cameron walked ahead. His step was light and springy, and his hollowed face had a look of grave expectancy. Once he started whistling again, softly, but Lord stopped him with a snarled command.

We must have gone three miles, before Cameron turned from a curve in the old road and plunged out of sight in

the ferns and tangled vines. We followed him. A few yards brought us into daylight, on the rocky rim of a low sand-stone cliff.

"The sign-posters," he said softly.

He pointed. Before us spread a broad, shallow valley of woods and open meadow. The sun glittered from the curve of a stream, but I saw no people.

"There's the house against the other cliff. Reddish walls, and green roof." I found it, then—a low graceful building that had seemed part of the landscape. "I heard a man sing-

ing."

I listened. It was midafternoon now, and a soft breeze had begun to disturb the midday hush. Leaves stirred lazily. I heard the sleepy hum of insects, the cool murmur of water running, a mockingbird singing—all wonderful sounds, half-familiar, that brought my boyhood back.

"Listen," Cameron urged.

There was a clear yodeling call-answered by a woman's voice.

"Keep down!" Lord's nasal voice was cautiously hushed. "We'll slip across, under cover. Study their weapons, and keep out of sight. If we're discovered—shoot first."

"Are you sure," Cameron protested, "that shooting's neces-

sary?"

"I'm running this show." Lord's sleepy eyes narrowed unpleasantly. "I'll tolerate no meddling from you."

A fern-grown ravine let us down from the low cliff. We waded the clear stream and climbed again through the woods beyond. Nearer the dwelling, the land had been cleared. We crossed an orchard of young apple trees, slinking toward the voices of the man and the woman.

Twenty years at space had not made us expert stalkers. Dry leaves rattled, twigs cracked, and pebbles clattered. Lord turned, more than once, with a hissed injunction of silence. But at last we came on hands and knees to the grassy rim of another ravine, and peered down upon the unsuspecting two.

They were running a machine. The young woman sat in a little cab of bright aluminum, moving levers. A toothed

bucket, on a long metal arm, scooped earth and stones from the side of the gorge to fill a hopper.

The man held a flexible hose, pouring a heavy yellow semi-liquid from the machine into a metal form across the little gorge. Presently he stopped to lift and adjust the plates of the form, and then poured again. Between the plates, I saw. a massive yellow dam was growing.

The machine ran quietly. There was only a subdued humming, and the occasional clatter of the bucket when sometimes it scraped a stone. It ate the dark soil, pouring out

yellow concrete.

I peered at Cameron, astonished.

He made a pleased little nod.

"A very neat step forward," he whispered, "in basic technology."

"Silence!" Lord hissed.

Below us, the man called to the girl, and she moved the machine on its wide caterpillar tracks. Watching them, I felt an increasing glow of pleasure. For twenty years I had thought and dreamed of life on earth; here at last was a glimpse of it—as any lucky man might hope to live it.

The man was a lithe young giant in shorts, bareheaded and brown. The sweat of his toil, in the hot afternoon, made a film that rippled and gleamed with every movement of his sun-bronzed body. Sometimes he paused to get his breath, smiling and calling down to the girl.

"Mushrooms for supper, what?" "Let's plant a lilac on the south terrace, shall we?" "I've thought of a name, darling-

let's call him Dane Barstow. Dane Barstow Hawkins!"

That name gave me a puzzled shock. Dane Barstow had been my own father's name—but it seemed quite improbable that the expected young Hawkins should be named for an unsuccessful traitor, long dead in the labor camps of the Squaredeal Machine.

But I soon forgot my wonder, watching them. Their absorbed happiness set me to dreaming wistfully. The girl was sun-colored, too, still slender, lovely. She ran the machine with a graceful skill, until the time when the man lost his balance as he hauled at the hose and teetered on the edge of the dam.

She stopped the machine then, with a sharp cry of alarm. After a moment of frantic clawing at the air, however, the man regained his balance. Seeing him safe, she laughed at him—a rich laugh, deep and musical and glad.

"Darling, if you had seen yourself! But please be careful—you're much too valuable to be made into the dam! If you're

so weak, we'd better stop-I'm hungry anyhow."

"Laugh at me, huh?"

Grinning fondly through a mock ferocity, the man hung up the hose and dropped down from the dam. The girl scrambled out of the cab and ran from him, still laughing.

"Darling," she sobbed, "you looked so silly-"

"Stop 'em!" whispered Lord.

Instantly, the automatics crashed. The girl crumpled down beside the bright machine. The man ran another step, uttered a strangled cry, fell sprawling on top of her.

"My God!" Doyle shouted incredulous protest. "What have

you done?"

The dwarfish Squaredealer fired twice more, expertly. His bullets thudded into the quivering bodies. The bitter reek of smoke stung my nostrils. Nodding to his bleak-faced gunmen, he rose calmly to his feet.

"Well, they didn't get away." His nasal voice had a shocking complacency. "I thought they might have seen us. Now we'll have to work fast, to learn what we can and get away to space. Doyle, call the craft—have it brought here at once. Cameron, inspect that machine—Mr. Hudd will want a full report on it. We'll look for their weapons."

Doyle had the self-discipline of a good officer. He was white-lipped, stunned, but any protest must wait for the proper channels. He reached obediently for the little radiophone

which I had been carrying.

Cameron's discipline was not so fine.

"You fool!" His blue eyes glared at Lord, his low voice crackling with anger. "You murdering fool! You had no excuse for that."

His brown fists clenched. For one terrified moment, I thought he was going to strike the Squaredealer. Lord must have thought so too, for he nodded at his two black gunmen and stepped quickly back.

"Please, Jim." I caught Cameron's quivering arm. "You'll

only get us shot."

"Quite right." Lord retreated again, watchfully. "Any further trouble, and I'll shoot you with pleasure. In any case, I shall report your insubordination. Now—if you want to stay alive—inspect that machine."

Angrily, Cameron shrugged off my hand. He stood facing Lord, defiant. Slowly—with an eager, dreadful little twist of his thin, pale lips—Lord raised his gun. Cameron gulped, shrugged, turned silently toward the bright machine.

Lord and his men searched the bodies. They found no weapons. The gunmen came back with a ring and a watch

and a jeweled comb they had taken from the girl.

Cameron attacked the machine with an intense, trembling savagery of movement—as if it had been a substitute for Lord. After a few moments, however, a sudden consuming interest seemed to swallow his wrath. His lean face became intent, absorbed. His fingers were steady again, very quick and skillful. Soon he was whistling with his teeth, so softly that Lord seemed not to hear.

I tried to help him, ineffectually. The machine baffled me utterly. Obviously, it had turned ordinary stone and soil into a very strong quick-setting concrete, a feat which seemed remarkable enough. There was, however, something more astonishing.

The machine had evidently used a great deal of electrical power. Electric motors drove the tracks and moved the bucket; heavy busbars ran into the cylinder where soil became cement. Strangely, however, I couldn't find the source of that power. There was no lead-in cable, no space for batteries, no possible receiver for broadcast power, certainly nothing bulky enough to be any kind of fission-engine. Yet there was current—as a painful shock convinced me. So far as I could determine, it just appeared spontaneously in the circuits.

Bewildered-shaken, too, by that unexpected shock-I stood back to watch. Working with such an eager-faced absorption that I didn't dare to question him, Cameron was studying a bit of the wiring which, for no reason that I

could see, was formed into a double coil of oddly twisted turns. His absently whistled notes turned gay.

Lord had posted his two gunmen on either side of the ravine, with orders to shoot any stranger at sight. He himself stood warily on the bank of the little gorge, watching Cameron. When Doyle had completed his call to the life-craft, Lord sent him and me to search the house.

"Look for weapons," he rapped. "Find out all you can, for our report to Hudd. Make it quick." His nasal voice was shrill with dread. "When the craft comes, we're getting out of here."

Doyle tramped in bitter silence until we were out of earshot, and then let flow a savage stream of low-voiced military profanity.

"That unprintable fool!" he finished. "Those poor farmers could have told us all we want to know, in five minutes—but

that blood-thirsty fool had to butcher them!"

He kicked angrily at a pebble.

"I'm sorry about your friend Cameron." He gave me a sympathetic look. "Lord doesn't like him. You know the sort of report he'll make. Cameron's done for. He was just too independent."

VI

Rory Doyle and I came up to the dwelling. The long, low building seemed all of one piece, a solid part of the hillside. It was apparently made of the same soil-concrete as the dam—differently colored in different rooms, the walls smooth and warm to the touch.

The furnishings gave an effect of sturdy and comfortable simplicity. The whole house seemed to tell of a warm, free, spacious sort of life—a cold shadow fell across it, when I thought of its builders and owners, lying slaughtered in the gully.

Hastily, we explored the inviting living room, the workshop where a handsome table stood half-finished in a clutter of plastic dust and shavings, the big kitchen fitted with shining gadgets to manufacture dishes and synthetic staples

on the spot, the cold locker stored with a rich abundance of frozen foods.

We found no identifiable weapons. Nor any good reason, that I could see, why men had fled the cities and abandoned their old way of life. Instead, it was another mystery that we found.

"They must have been very nearly self-sufficient." Peering about the silent rooms, Doyle tried to reconstruct the lives of the murdered couple. "I think they built and furnished this house, with their own hands—everything has the look of good, careful workmanship; they were adding a new room, which isn't roofed yet. Evidently they grew or manufactured their own food. That little machine in the shed is grinding a hopperful of leaves and sticks into something like cloth, very beautiful and strong. All these gadgets must use a lot of power."

His puzzled eyes came back to my face. "But where does the power come from?"

I had to shake my head.

"The house isn't wired," I told him. "Each gadget seems to generate its own current—without any batteries or generator or anything else that makes sense to me. Just like that machine at the dam."

On a table in the living room we found a telephone instrument, cradled on a little black plastic box that had no wires attached. Doyle picked it up impulsively, then reluctantly set it back again.

"We could call," he said. "Perhaps we could just ask what we want to know. But Mr. Lord doesn't want it done that way."

We heard the roar of jets, then, and hurried back to the ravine. Doyle had brought a blanket from the house, which he spread decently over the two bodies. Sinking slowly upon an inverted mushroom of blue electric fire, the life-craft landed a hundred yards below the dam. Scorched weeds smouldered about the bright fins that held it upright.

On the bank of the little gorge, Lord turned from watching Cameron, to question Doyle. But when Doyle merely shook his head, with an empty-handed shrug, Lord went back to shout at Cameron:

"On the double, now. Time to go. Let's see what you've got."

Cameron came up out of the ravine, carrying something in his hand. It was a piece of thick copper wire, shaped into a double coil of oddly-shaped loops at odd-seeming angles and held in shape with a transparent plastic rod.

"This is it," he said.

The hushed elation of his low voice told more than his words. I stared at him—for something, I thought, had somehow transformed him. His emaciated body had grown proudly straight. His hollowed face was smiling, illuminated with a stern joy which almost frightened me.

"Well?" Lord retreated as if afraid of Cameron's blue eyes. His sleek black head made a quick nod, to bring his two gunmen back from the ends of the unfinished dam. "What

is it?"

Cameron held up that bit of wire on the plastic rod, with both his hands. His face had a look of solemn awe—as if the thing in his hands had been, perhaps, some unique and long-sought bit of priceless, ancient art.

"Speak up," Lord rapped nervously.

Cameron looked up at Lord again, with no awe at all. His blue eyes showed a sudden glint of ironic amusement. Yet still he held that bit of wire as if it were a precious thing.

"It's what we've all been looking for." Cameron's voice held the quick ring of triumph. "The reason men abandoned Fort America. Why they deserted the cities. What happened to the Directorate, and to Tyler."

Cameron's eyes turned sardonic.

"It's also what is going to happen to the task force," he added softly. "To Mr. Julian Hudd. And even to you, Mr. Lord."

Lord's sleepy vellow eyes slitted dangerously.

"I'll tolerate no further insubordination," he snapped savagely. "Tell me what you've got."

Cameron turned to Doyle and me. Angrily, Lord hauled out his automatic, and then slowly thrust it back again. I suppose that even he could see the folly of extinguishing the source of information. Perhaps he was a little awed by Cam-

eron. But he still intended, I knew, to get his revenge. Cameron ignored his sullenly boiling fury.

"Chad, you remember that little gadget we called an induction furnace? Well, we were on the right track—if I hadn't been afraid of blowing up the *Great Director*. And this is the thing we were looking for."

Generously, he gave me far too much credit. I had known, of course, that the device was something more than a furnace—for it made atomic changes in the metal samples we fused, while it somehow generated power. That much I had known, and held my tongue about it. But I had really understood neither his effort nor his goal.

From me, Cameron turned impulsively to Doyle.

"Captain, may I have a word with you?"

"Of course." Doyle raised his red brows in puzzlement. "What about?"

"This." Cameron lifted the thing in his hands. "I've always admired you, Captain. I trust you now." He beckoned with his head, toward the end of the dam. "Let me tell you what this things means to you—and all of us." He glanced aside at the simmering, suspicious little Squaredealer, adding: "Listen for just ten minutes, Captain, and you'll be free of Lord and his sort."

Confusedly, Doyle shook his head.

"Careful, Cameron." I knew he was no friend of Lord's, yet his voice was shocked. "Watch yourself. You sound like treason."

Cameron gave him a brief, sardonic grin.

"If there is such a thing, any longer." His low voice turned grave again. "Though I imagine that this little device has repealed a lot of the old laws." He glanced at the twisted wire, and regretfully back to Doyle. "I wish you'd listen, Rory. But I know how you feel. I'll save your life if I can."

Little Lord was quivering with white-lipped fury. His hand hovered close to his gun. Yet caution or curiosity must have tempered his wrath, for he gestured sharply to halt his black-clad gunmen.

"Explain this strange behavior, Cameron," he snapped. "Before I have to shoot you down."

Cameron turned back to him.

"No, I don't think you'll do that, Mr. Lord," he murmured very softly. "Because you're an anachronism, now, along with the dinosaur and the atom bomb. Technological advancement has passed you by."

Lord's narrow, sallow face turned dark. Still, however, he seemed to want the secret of that piece of twisted wire more than he wanted Cameron's life. He nodded furtively to his gunmen, who began edging aside to Cameron's right and left.

"What's that gadget?" he snarled.

Cameron had turned to me.

"You'll come with me, won't you, Chad?" His low voice had a tremor of anxious appeal. "There's a job we have to do, with this." He moved the little device. "It's not too dangerous—if we're lucky. I need you, Chad."

I wanted to go with him—wherever he was going. But I could see the two bleak-faced men moving warily to get behind him, I could see Lord's wolfish snarl and the cold menace of his yellow eyes, I could remember the SBI and all the cruel art of intensive interrogation. Somehow, that bit of wire and plastic had made Cameron seem a bolder and bigger man, but still I hadn't felt the power of it.

Miserably, I shook my head.

"That's all right, Chad." He gave me a brief, cheering grin. "Perhaps I'll have a better chance alone. I'll do my best to save you."

"You, stand still!" Lord shouted, and sharply ordered his gunmen: "Shoot for the knees, if he tries anything."

Cameron turned back to him, soberly.

"Better call them off, Mr. Lord." Something in his low voice sent a shiver up my spine. "It's time for you to think of your own skin, now. Because it's clear that you made error when you butchered that man and girl. You aren't safe here—or anywhere."

The little Squaredealer must have heard that something in Cameron's voice, for his sallow face turned a sickly yellow-gray. His perspiring arm gestured again, uneasily, to hold his gunmen back. He blinked apprehensively.

"I'll be back," Cameron said. "But I advise you not to follow."

He dropped into the ravine, up beyond the dam.

Lord hesitated for a long second, pale and breathless. "Get after him," he screamed at last. "Shoot him in the legs."

He didn't lead the pursuit, however, and his men weren't eager. That same something in Cameron's voice must have made them doubt that it was really wise to follow. They ran uncertainly along the rim of the little gorge, firing a few wild shots.

Ahead of them, something flashed. Its terrible brightness made us duck and shield our eyes, even in the full daylight. The detonation came instantly—a single, terrific report. A green tree, beside the ravine, shattered into smoking, whistling fragments.

Lord and his two men followed no farther. As soon as the burning splinters stopped falling, they scrambled up off their faces and hastily retired.

"Unprintable leather merchant!" gasped the little Square-dealer. "He'll regret this." He made a rather fearful gesture toward the life-craft. "On board!" he shouted. "We're getting out of here."

VII

We tumbled through the valves, and Lord ordered Captain Doyle to blast away at full thrust. Before Doyle could reach his bridge, however, the signal officer shouted down the ladder-well:

"Captain Doyle! I've just got contact with the *Great Director*. Mr. Hudd is on the screen. He wants a full report, at once, sir."

The earth's intervening mass had cut off microwave transmission since we dropped over the bulge of it before we landed; now, however, the planet's rotation had brought the flagship back above the horizon. We climbed hurriedly into the little television room.

Gigantic on the screen, Hudd boomed his question:

"What's the story, Lord?"

"A crisis, Mr. Huddl" Lord looked damp with sweat, and his voice turned shrill. "We're in danger. I request permission to blast off at once, and make our full report at space."

"What's the crisis?"

Lord gulped uncomfortably. "Your smart feather merchant got away."

Hudd's great, blue-jowled face was furrowed with sudden

concern.

"Then I'll take your full report, Mr. Lord," he said decisively. "Right now."

"But Cameron has a weapon," Lord protested desperately.

"Something that strikes like lightning-"

"Then the entire task force may be in peril," Hudd cut in. "Now let's have it—at once."

Lord talked rapidly, while sweat burst out in great bright drops on his narrow face and soaked dark blotches into his uniform. Hudd listened gravely, now and then turning to

Doyle or me with a sharp question.

It was Doyle who told him how Lord and the two guards had shot the couple named Hawkins. Hudd's heavy, sagging jaw hardened at the news. When the report was finished, he must have started his habitual nervous drumming—his hands were hidden below the screen, but the speaker brought a worried rapping.

"You made two blunders." His small, troubled eyes peered accusingly at Lord. "You let Cameron get away with the vital information I sent you for. And you killed those people before they had a chance to talk. I'm afraid you have gravely compromised our objectives, Victor—and your own future."

All his swagger gone, Lord twisted and cringed before the steady eyes of Hudd. Still perspiring, he seemed to fawn and cower like a punished dog, as the loud, aggressive voice of his master continued:

"We must take bold, immediate action, Victor, to restore the situation."

"Right, Mr. Hudd," Lord said eagerly. "Shall we blast off,

now?"

"You will remain where you are "Hudd said "Cet in

"You will remain where you are," Hudd said. "Get in touch with the inhabitants, if you can. Offer apologies and compensation for the killing. Stall for time. Find out all you can about the weapons, the military establishment, and the government of the inhabitants."

Lord gulped uneasily, nodding.

"Post a reward for Cameron." Hudd's big mouth set hard. "My mistake, to trust him, Get hold of him, Use extreme interrogation. Make him talk, then liquidate him. He has gone too far."

Hudd shook his head regretfully.

"Too bad," he added. "I always liked him."

I felt cold and ill. Hudd's loud words had struck me like numbing blows. That harsh command was no surprise to me, but it brought me a dull sickness of regret, because I had failed Cameron when he asked me to go with him.

Lord was protesting again:

"Mr. Hudd, I think we'll be attacked-"

"I'll support you," Hudd assured him, and turned to speak to his signal officer: "Change the scramble code-we don't know who is trying to listen.

The unseen officer on the flagship droned out a code number, repeating each digit. Our officer droned it back. The screen darkened, flickered. Then the image of Hudd

came back, huge and resolute, declaring:

"Whatever happens, Victor, I intend to restore the Directorate. I am taking prompt action, to that end. The Valley Forge and the Hiroshima are proceeding to the moon. They will land a new garrison, with the necessary repairs to bring Fort America back into effectiveness. The Yorktown, the Rio Plata and the Leningrad will stand by, spaced on an orbit ten thousand miles from the earth, to relay communications and bombard any targets we discover.

"With the Great Director, I'm coming to earth."

Lord licked his thin, colorless lips.

"You're too daring, Mr. Hudd," he protested shrilly.
"It took audacity to establish the Directorate." The great boom of Hudd's voice in the speaker visibly startled Lord. "It's worth audacity to restore it. I'm coming, at full thrust,

to take personal command."

Lord remained aboard the life-craft that night. His uneasy fancy must have dwelt upon the fused metal we had found beside that skeleton in the weeds and the sudden bolt that struck that tree as Cameron fled. Perhaps he thought of the two still bodies in the gully; no doubt he peopled the dark valley with vengeful enemies.

My own imagination, I know, was busy enough. Staring out into the thickening night, I felt myself the helpless spectator of stupendous forces sweeping grandly toward collision.

On one side, there was the Atomic Age itself, expressed in the rekindled might of Fort America, in the fine discipline of the task force, in sleek guided missiles, in the determined

sagacity of Mr. Julian Hudd.

On the other side, there was that unknown power that had swept the old garrison from the moon and driven men from the cities and destroyed the Directorate. All I had seen of it was a piece of twisted wire, a blasted tree, and the change in Jim Cameron. But that was enough—I waited for the fireworks.

After dark, Captain Doyle volunteered to go back to the house.

"Mr. Hudd wants us to get in touch with the inhabitants," he reminded Lord. "And we saw some kind of telephone."

With evident reluctance, Lord agreed.

"If you contact anybody, call for the government," he ordered. "Offer a reward for Cameron." His sleepy eyes glittered cunningly. "If anybody mentions those two dead peasants, we're holding them—alive—for Cameron's return."

Doyle went down through the valves, accompanied by the signal officer to help him work the strange radiophone. They were lost in the pale moonlight among the young apple

trees. They didn't come back.

After an hour, Lord sent me after them, with one of his gummen for escort. Soft lights came on of themselves, when I opened the door. I tried to call Doyle's name, and found that my voice had gone to a grating whisper. Walking through the silent rooms, we found nobody.

The little radiophone, oddly, was also gone.

At midnight, Hudd called again. At the news of Doyle's apparent desertion, he muttered forebodingly:

"It's something pretty sinister, that takes so true a man."

The interstellar cruiser landed, just at dawn.

The thunder of it woke me out of a nodding doze. Moving groggily to a port, I saw a glare that burned all color out of the valley, so that everything was black or blinding white. I

had to cover my smarting eyes. The wind rocked the lifecraft on its stabilizers, and the earth shuddered.

When the thunder ceased and that cruel light was gone, I saw the cruiser standing two miles down the valley. Dark smoke billowed up about the base of it from the green woods burning. Its tall peak, towering out of the night in the valley, was already incandescent with sunlight.

Immensely high, the great flat turrets swung with ominous deliberation. The huge bright tubes of rifles and launchers lifted out of their housings, implacably purposeful. Hudd called again, looking as massively indomitable as his flagship.

"Have you met the inhabitants, Mr. Lord?"

"Not yet, Mr. Hudd." Relieved by the great ship's coming, Lord had his swagger back.

"Then you soon will," Hudd told him. "Our lookout reports a flying vehicle, approaching you now. Make contact,

and report immediately."

We all turned to the ports, in time to see the red glint of sunlight on the rotor of a small helicopter. It landed among the young apple trees. Three people got out. One of them began waving a bit of white cloth. With a shock of dismay, I recognized Jim Cameron.

VIII

The three walked slowly down toward us across the young orchard. The other two paused by the dam, one of them bending to look at the bodies under the blanket. Cameron came on halfway to us, before he stopped and stood waiting.

Watching through a port in the signal room, Lord nervously wet his lips. Beneath a puzzled unease, his beady eyes had a glare of yellow elation. He sent me out to find what Cameron wanted.

Grinning with pleasure to see me, Cameron put down the stick with his handkerchief tied to it. Fatigue had drawn his stubbled face and smudged blue shadows under his eyes.

"Jim, you shouldn't have come back." I pitched my voice too low for Lord's gunmen, covering us from the valve. "Because you made a fool of Lord, when you got away. He'll

never forgive that. He's got Hudd's permission to liquidate you."

He grinned wearily, glancing at the two behind him.

"You can tell Mr. Lord that he's in no position to liquidate anybody. On the contrary—these neighbors of the Hawkins couple have come to arraign him and his guard for the murder."

I must have gasped with astonishment.

"I'm afraid Lord will be unreasonable." He frowned, regretfully. "I came along to try to prevent any needless destruction. There's not much use for Lord to resist, and no need for others to be killed. Better tell him that."

Back aboard the life-craft, I told Lord what the strangers wanted. His pale, peering eyes rounded with wonderment, then narrowed to hard yellow slits. He glared malevolently out at Cameron.

"I suppose that damned feather merchant is the chief witness? Well, I'll fix the lot of them!" He shouted up the ladder-well to the astrogator, now acting as signal officer, "Get me Mr. Hudd!"

I followed him into the narrow signal room.

"It's your pet civilian," he shouted bitterly when Hudd's face appeared huge and interrogative on the screen. "And a couple of yokels with some nonsense about arresting me for murder."

"So?" Thoughtfully Hudd rubbed his blue, multiple chin. "I want to talk to them. Offer them all three safe-conduct to come aboard. Tell them I'll discuss compensation for the killing. You can bring them on the life-craft, Mr. Lord."

The negotiations which ensued were somewhat involved. I went back and forth, between Lord and Cameron. Cameron returned to consult with the watchful two by the ravine. Hudd and Lord conferred by television, Lord's nasal voice rising steadily with ill-concealed anger, Hudd frowning with increasing concern.

"I'd accept Mr. Hudd's safe-conduct, myself," Cameron told me. "But the Enlows don't want to trust him. They are willing to talk to Mr. Hudd, but he'll have to come out here."

With a surprising boldness, Hudd agreed to do that. "But, Mr. Hudd!" Lord protested sharply. "We can't treat

with them—two savages and a mutineering feather merchant. Think of your own safety. Why not let us take off, sir, and then wipe them out with a salvo of radiotoxin shells from the cruiser?"

Hudd shook his head stubbornly.

"I'm coming over, Victor, to handle this myself." His red, worried eyes turned to me. "Chad, you go back and tell Jim Cameron to wait till I get there."

Lord's eyes narrowed suspiciously.

"Don't you give me up, Hudd." His angry nasal voice was hard and dangerous. "If you do, you're also giving up your New Directorate."

"I know that," Hudd assured him blandly. "You can trust me. Victor."

Lord dismissed me, with a curt, sullen nod. I went back across the burned grass to tell Cameron that Hudd was coming.

"He's smart." Cameron nodded approvingly. "Maybe he can save his neck." He took up the white flag again. "Now we had better rejoin the Enlows," he said. "They might misunderstand."

We walked back to the people waiting at the dam. I thought of Lord's gunmen crouching in the lock behind us, and the skin on my back crawled uneasily.

The two were a man and a young woman. They were both tanned, lean, sturdy; dark hair and gray level eyes showed a family likeness. Tight with the shock of what they had seen under the blanket, their faces were hard with purpose.

"Are they coming out?" The man's quiet voice was taut as his gaunt face.

"Not yet." Cameron was urgently persuasive. "But please give me a chance to tell Mr. Hudd about the equalizer. I think he's smart enough to listen."

The man nodded his weather-beaten head. I saw that he carried what looked like a bulky flare-pistol. His deep-set angry eyes peered up at the enormous flagship, not at all afraid.

"If he wants to listen," he agreed. "But we're going to get the killers."

"I'll try to get Mr. Hudd to give them up," Cameron

promised, and then he introduced me. "Chad Barstow. A likely candidate for the Brotherhood, as soon as he learns to

use the equalizer."

The girl wore a radiophone, much like the one we had seen in the house—it must have been such units that made those scrambled signals we had heard. The little plastic case was snapped to her belt, the headset over her lustrous hair. She had been listening to that, but now she looked at me, her eyes widening.

"Yes, he's Dane Barstow's son." Seeing her troubled glance toward the gully, Cameron added quickly, "He had nothing

to do with that."

She gave me a strong handclasp.

"Jane Enlow," Cameron said. "Her father, Frank Enlow."
The gaunt man gripped my hand silently, but his angry

eyes flashed back to the life-craft and the cruiser.

"Before the equalizer," Cameron told him, "Mr. Enlow was a janitor in Tyler's Squaredeal Hall. He was just telling me about the Director's last days. After the equalizer, he smuggled Tyler out through the mob that was shouting for him under the balcony. Tyler lived for years in Mr. Enlow's house over the ridge, yonder, writing a history—trying to justify his career."

"A nasty old man!" Jane Enlow pouted. "He wouldn't learn

the equalizer. Dad had to take care of him."

High up on the bright side of the cruiser, blue fire spurted. Frank Enlow crouched toward the ravine, swinging up his pistol-like device. Cameron called out, hastily:

"Don't shoot-that's probably Mr. Hudd."

As the gaunt man relaxed, I studied his weapon with a shocked fascination. It looked like a miniature guided-missile launcher, rather than a gun. It seemed fantastically small, yet the lank man had a strangely confident air of facing the cruiser's weapons on even terms.

The girl was listening again to her radiphone. She twisted knobs on the case at her belt, and finally shook her dark

head.

"Nothing." Her voice was gloomy. "They're taking too long."

Hudd's life-craft approached us swiftly, a bright projectile

floating nearly upright on a jet of screaming fire. It crossed the burning forest to land near the other craft. The valves slammed open as soon as the dust had cleared, and Hudd's

aide jumped out.

The hard-bitten commander darted across the blasted ground and hurried up to us. He seemed upset by Hudd's decision. First he wanted Cameron and the Enlows to come aboard the life-craft to talk; then he wanted to send a bodyguard with Hudd; finally he warned that a general bombardment of the surrounding country would begin at once, if anything happened to Hudd.

"We've come for the killers," the lean man informed him gravely. "Since Mr. Cameron has taken the Brotherhood oath, the three of us form a competent court. We're bound to listen to any evidence that Mr. Hudd can offer. He will

not be harmed, unless he tries to interfere."

Outraged, the commander went back. Immediately Mr. Julian Hudd climbed down between the bright fins. He came out of the burned area at a painful, heavy run. Gasping for breath, he waddled up to the dam.

"Well, Jim!"

He grinned at Cameron, shook hands with the rawboned man, gave the girl a bow of open admiration. His small, shrewd eyes studied the unfinished dam and the abandoned machine in the gully.

"The incident here was most regrettable." Hudd's voice was a chesty, confident rumble. "I'll see that adequate compensation is paid. Personally. You people needn't concern yourselves any further."

His keen bloodshot eyes studied the gaunt man.

"Now, I want to take up something more important, I've been trying to get in touch with your government." His broad, blue-tinged face was still a genial mask, but his loud voice turned imperious. "I demand that your government—"

The lank man's voice was very quiet, yet the cold ring of it made Hudd stop to listen.

"We have no government," said Frank Enlow.

Hudd puffed out his cheeks, slowly turning red with anger. "That's the surprising fact, Mr. Hudd," Cameron assured

him gravely. "You'll have to get used to it. When the equalizer appeared, nations became extinct."

Ignoring him, Hudd glared at the lank man.

"You must have some organization."

"Only the Brotherhood," Enlow said. "It has no power to surrender anybody to you, because membership is voluntary."

Hudd's red eyes blinked, skeptical and defiant.

"Get in touch with this Brotherhood." His voice was rasping, arrogant. "Have them send a responsible agent. Have him here by noon, local time." He paused, ominously. "Otherwise, the task force and Fort America will open fire, at every likely target we can find."

Cameron made a startled gesture, as if to catch his arm. "Please, Mr. Hudd," he protested sharply. "Wait until you know what you're doing."

Hudd kept his savage little eyes on Enlow.

"The young lady, I see, has a radiophone." His voice was loud and ominous. "You had better start calling this Brother-hood—"

"We came here for another purpose." The lank man met his truculent gaze, unimpressed. "We've come for the killers."

Hudd's bluish face swelled again with anger.

"Nonsense!" he shouted. "Mr. Lord is my second in command. He was acting under orders. I assume the responsibility. I'll pay for any unjust damage, but I refuse to subject him to humiliation."

The lean man listened to that, and nodded his rawboned head, and stalked away silently toward the ravine. Cameron hurried after him, visibly alarmed.

"The killers can wait," he called urgently. "Doyle must be trying. Mr. Hudd doesn't understand the equalizer. Please give me time to tell him about it."

The lank man turned back, reluctantly.

"If he wants to listen," he agreed. "We'll wait half an hour." With a question on his face, Cameron turned to Hudd.

"All right, Jim," Hudd gasped, explosively. "I want to know all about this equalizer, anyhow." His red angry eyes went back to the gaunt man. "But my ships and the fort will open fire at noon."

IX

Hudd sat down on a hummock of grass, breathing hard with the effort of moving his clumsy bulk. His massive shoulders bunched with bold defiance. Only the quick movements of his eyes betrayed the intense and desperate working of his mind-they were the eyes of a fighting animal, fearful, vet audacious and altogether ruthless.

"Now!" he gasped. "This equalizer?"

Cameron squatted on his heels, facing Hudd. Behind us, as he talked, the sun rose higher. The flat green valley lay motionless under its hot light, and a pungent blue haze settled about us from the green forest burning.

"I heard the story last night. The beginning of the equalizer takes us back nearly twenty years." Cameron's tired, dark-smudged eyes came for a moment to me. "To your own father, Chad." His haggard and yet animated eyes went back to Hudd. "I think you remember Dane Barstow?"
"The traitor?" rumbled Hudd. "He died, I believe, in the

labor camps."

"But he didn't," Cameron said. "Because Tyler learned that he was on the trail of something remarkable, and had him taken from the camps to a solitary cell at Fort America. The SBI went to work on him there, with extreme interrogation."

As Cameron glanced at me again, I noticed a strange thing. The story and the memory of my father's misfortunes brought me a bitter resentment, but now I noticed that all the old pain and hatred was gone from Cameron's face. Something had swept away his old saturnine reserve. He seemed oddly friendly even to Hudd.

"Finally," he said, "Barstow talked. He told what he had done and admitted all he had hoped to do. He even agreed to complete his interrupted work."

I knelt down to listen.

"Though he was half-blind and crippled from the extreme treatment, and sometimes out of his head, they took pretty drastic precautions. They kept him locked in that steel cell on the moon-one of those we saw there, I imagine, Chad.

Two guards were always with him. He was allowed paper and pencil, but no other equipment. If he wanted calculations made, or any experiments tried, such things were done for him by Atomic Service engineers."

Cameron briefly smiled, as if he shared my pride.

"Yes, Chad, your old man was all right. Working under such difficult conditions, shattered as he was, he charted a new science and created a new technology. And then—when we had been out at space about two years with the task force—he overturned the Directorate."

Hudd's bold eyes had drifted back to the sun-browned girl—who was listening, not to Cameron, but anxiously to the little portable radiophone. Now he started ponderously at Cameron's last words, to gasp for his breath and wheeze incredulously:

"How could he do that?"

"Not so hard, with the equalizer." Cameron grinned at Hudd's blinking, startled stare. "From his cell on the moon, Barstow smashed the Directorate. He didn't need any weapons or equipment. All he had to do was tell his jailors what he had discovered."

Hudd made a hollow, croaking sound. "How's that?"

"The news of the equalizer spread from one man to another," Cameron said. "Those same engineers who had been assigned to get the invention from him set up a little illicit transmitter and beamed the details back to earth with equalizer power, on every frequency they could get through the ionosphere.

"That finished the Directorate."

Hudd picked up a small red pebble and began nervously tapping the sod with it, as he had drummed on his desk with the little gold head of Tyler. His furtive eyes flashed to the lean man's weapon, and back to Cameron's face.

"That's too much!" His voice was harshly unbelieving. "No mere fact of science could defeat Fort America-much less

wreck the Squaredeal Machine."

"Barstow's equalizer did," Cameorn said. "Perhaps because the old technology of the Atomic Age had already reached the breaking point of over-complexity and super-centralization. When Barstow created this new technology, there was

a natural swing to the opposite extreme—to simplicity, individualism, and complete personal freedom."

"So?" Hudd thumped the sod with his pebble, scowling at Cameron. "Just how does it work, this equalizer?"

Cameron glanced doubtfully at Frank Enlow.

"Tell him," the gaunt man said. "Barstow wanted every man to know. Generally it has a good effect." He glanced at a watch on his brown wrist. "But hurry—your time is running out."

Hudd's great shoulders lifted with aggression.

"So is yours," he snapped. "I'm willing to listen, but my men won't hear. I'm not yielding anything. This Brotherhood had better throw the towel in, by noon."

"Tell him," Enlow repeated.

Cameron launched into his explanation. His fatigue seemed forgotten, and some inner excitement made his haggard face almost vivacious.

"The old atomic reactor, you know, was an enormously clumsy and wasteful and dangerous way of doing extremely simple things. Pure energy exists in the atom, and that is what we want. But the old atomic plants used intractable and inadequate processes to change kinetic and electrical and binding energy into heat, and then required expensive and inefficient machinery to turn a little of that heat back into electricity.

"Even with all its elaborate complexity, the reactor plants could tap only a little of the binding energy which holds electrons and protons and neutrons together into atoms. The mass energy of the particles themselves—really nearly all the actual energy of the atom—it couldn't even reach.

"Barstow's dream—like my own—was merely a simple way of doing a simple thing. Material energy exists, as Einstein demonstrated. Barstow dreamed of a simple way to let it flow. The equalizer is his dream, realized."

I couldn't help the breathless interruption:

"That piece of wire?"

"Just a solenoid." Cameron nodded. "But wound in a certain way, not helically, so that its field slightly alters the co-ordinates of space and slightly changes the interaction of mass and energy. The atomic particles of the solenoid are

equalized, as your father termed the process. The converted

energy appears as direct current in the wire.

"The fact is simple—even though the tensors of a new geometry are required to describe the solenoid field. That apparent complexity is more in our awkward description, however, than in the vital fact. The actual specifications of the equalizer can be memorized in five minutes."

Cameron's intent, elated eyes looked aside at me.

"The safety-feature is what threw us, Chad, with our induction furnace experiments," he told me. "Our gadget annihilated matter—degenerating iron atoms into sodium—and produced electric current. The increased output intensified the conversion field, and the intensified field increased the output. An excellent arrangement, if you want a matter-bomb—but highly unsafe for a power plant.

"Your father solved that problem, Chad-very simply, too. Just a secondary solenoid, in series with the primary, which develops an opposing voltage as the equalizing field expands. It gives you a safe, guaranteed maximum voltage—the pre-

cise value determined by the way it's wound."

Hudd's deep-sunken eyes blinked skeptically.

"You mean, you can generate electricity?" he rasped. "With just a coil of wire?"

"And a few stray ions to excite it," Cameron told him. "A pound of copper solenoid would drive the cruiser, yonder, out to the Dark Star. Or iron, or silver—the metal doesn't matter; it's only the exact shape and alignment and spacing of the turns of wire."

Hudd shook his head, in massive unbelief.

"Perpetual motion!" he scoffed.

"Almost." Cameron grinned. "Equalized mass is converted into electrical energy, according to the Einstein equation. The solenoid wastes away—but slowly. One pound of solenoid will generate ten billion kilowatt hours of electricity."

"If it's all that simple," Hudd objected shrewdly, "some-

body would have stumbled on it, by accident."

"Very likely, men did," Cameron agreed. "Not many—the shape of the coils is not one you would want for anything else; and the turns must be very exactly formed and aligned, or else the regenerative effect is damped out. The few who

did it must have been instantly electrocuted—because they didn't also stumble on Barstow's safety-winding."

"I'll believe it when I see it," muttered Hudd.

Cameron pointed up the edge of the ravine, to a shat-

tered tree-stump.

"Mr. Lord wanted a demonstration, yesterday," he said. "I straightened part of the safety-coil on a small power unit from that machine, to step up the voltage, and tossed it into a green tree yonder."

"A rather reckless thing to do," commented the lean man. Hudd said nothing. His black-haired, ham-sized hand tossed the red pebble, aimlessly, and caught it again. His troubled eyes peered at the stump, at the gaunt man's weapon, at the enormous tower of the *Great Director*.

"You have ten minutes to give up the killer, Mr. Hudd," drawled Frank Enlow. "Otherwise you may see a better dem-

onstration."

Hudd snorted: a blast of defiance.

"I'll wait for it," he gasped. "You can't bluff me."

A shadow came over Cameron's face. When his tired eyes closed for a moment, I saw the blue stains under them. He sat back on his heels, his emaciated body sagging as if from

a punishing blow.

"It's no bluff, Mr. Hudd." He paused as if to gather himself for a weary and yet vehement protest. "You just don't grasp what the equalizer means. It ended the Atomic Age. The Directorate was part of that lost era. You can't hope to restore it, now, any more than you could revive a fossil tyrannosaur. Perhaps you can cause some needless bloodshed and death."

Hudd's wide mouth hardened with an unconvinced hostility.

"Tyler spilt plenty of blood, building the first Directorate," he commented coldly. "I may have to pay the same price again, but I expect to win. Perhaps Tyler's garrisons mutinied when they heard about this equalizer. My men won't hear about it."

"It wasn't mutiny, Mr. Hudd," Cameron insisted. "There was no fighting. The Directorate wasn't overthrown—it simply ceased to exist. When the equalizer appeared, there was

no more reason for Fort America than there is for arrowmakers. The officers recognized that, as well as the men. The garrison just packed up and came home."

"Home to what?" Hudd challenged him. "The people here were already deserting the cities, leaving nearly everything they owned. There must have been something else wrong—

perhaps some biotoxin loose—to cause such panic."

"You still don't get it." Cameron shook his head with a tired impatience. "The equalizer freed the city-dwellers, just as it did the garrison. Because most people didn't live in cities by choice. They were huddled into them by the old division of labor—specialized cogs in a social machine grown ruinously complex.

"The equalizer abolished the division of labor—at least in military technology. Every man with a piece of wire became a complete military specialist, competent to defend himself. Using the new control of atomic and molecular processes, he could also provide for nearly all his own ordinary wants.

Complexity was replaced with stark simplicity.

"Take the couple who lived here." He nodded regretfully at the empty house behind us. "They built their own home, made their own food and clothing. They were setting up this dam, when they were murdered, to save their own land from erosion. They weren't slaves of any single skill, or prisoners of any class. They had no reason to hate or fear their neighbors—until we came along."

Hudd blinked, still doubtful.

"Why were the cities so utterly abandoned?" he questioned. "Why was all that money left behind, as Lord reports? Why were signs posted, warning people out?"

Cameron glanced up at the great frowning ship.

"The cities were a product of the old technology, and they died with it," he argued doggedly. "The day of the equalizer, workers walked out and services stopped. There was no food, no power, no water, no sewage disposal. City life was impossible, without division of labor.

"As for money, paper dollars were merely shares in the extinct Atomic Age. Metal was still useful—but the equalizer must have made it easier to refine new metal than to wreck the cities. About the danger—I forgot to ask."

He turned inquiringly to Frank Enlow.

"Criminals," the lean man drawled. "A few men and women too stupid or too vicious to use the equalizer. They never left the cities. They stayed hidden, trying to exist by raiding and looting. They used the old military weapons. A few of them became very cunning and dangerous. The signs were posted during our campaigns to hunt them out."

"Don't you have worse criminals?" Hudd demanded

shrewdly. "Those who do use the equalizer?"

Enlow shook his head.

"The users of the equalizer have very little economic reason for crime," he said. "And people armed with it aren't very likely victims. It's simply because crime has become so rare that the Hawkinses weren't alert."

Hudd's eyes dwelt on the lean man's weapon.

"This Brotherhood?" he asked shrewdly. "If it isn't a government—what is it?"

"A voluntary substitute." The gaunt man glanced at me. "Your father's last great project, Mr. Barstow. After he got back his health, he spent the rest of his years organizing the Brotherhood."

"Just what does it do?"

"Runs schools and libraries and hospitals," Enlow told him. "Supports laboratories. Builds irrigation projects. Anything for the public good. It operates the post office and issues money against metal deposits."

Hudd nodded triumphantly.

"If it can do all that, it can surrender to me."

"The Brotherhood has no authority." Enlow shook his head, rawboned and resolute. "People may join or leave it, as they please. It is supported by voluntary contributions, and the elected officers serve without pay. They can't surrender, Mr. Hudd—but they can organize the common defense."

"If you have no law," Hudd demanded shrewdly, "then

why do you want Mr. Lord?"

Enlow stared back at him, brown and lean and angry. "In the Brotherhood, we enter a voluntary agreement to respect and defend the rights of others. I think your Mr. Lord has proved himself a public menace."

Hudd pulled absently at his thick lower lip.

"If you've got no government," his harsh voice came, "then I think you've got a madhouse—and all the madmen armed with insane weapons."

Enlow shook his dark head with a lean dignity.

"You're living under a false philosophy, Mr. Hudd. You believe that men are evil, that they have to be driven. Fortunately, that philosophy is mistaken—because men with equalizers can't be driven."

As Hudd made another derisive snort, Enlow looked at his watch.

"Unfortunately, a few men are bad," he added gently. "Your time is up. We want those killers."

Cameron turned back to Hudd, importunately.

"Why don't you give them up?" he urged. "And let me

tell your men about the equalizer?"

"I will not." Hudd came laboriously to his feet, red and gasping from the effort. "I still think you'd have a hard time to silence Fort America—with all your equalizers. And my ultimatum still expires at noon."

Having delivered that ominous blast, Hudd turned back to Jane Enlow. She had been listening to her radiophone, absorbed. Now, as she became aware of Hudd's hungry eyes, she started, a rich color darkened her tan. Hudd made her a bow, ponderously graceful, in the manner he must have learned while he was Tyler's Director-General of Europe.

"I deeply regret the awkward circumstances of this first meeting, Miss Enlow." He smiled with a genial admiration. "But I hope soon to offer you an introduction to the best society of the New Directorate."

Flushing deeply, she said nothing.

Hudd bowed again. After a moment, he stalked heavily back toward his life-craft.

Little Victor Lord, watching from the other craft, must have misunderstood that bow. I can imagine his sweating consternation when he saw the apparently friendly ending of the little conference and decided, no doubt, that Hudd had abandoned him.

The crewmen, evidently, opposed his flight.

The sudden crash of guns made a muffled booming in the thin bright hull. Two spacemen jumped wildly out of the open

valve, which slammed immediately behind them. One of them stumbled on his knees, pressing red, agonized hands against his wounds. The other tried to drag him out of danger—until the incandescent blast of the jets flattened and hid them both.

X

The fugitive life-craft lifted on that column of thundering fire, at first very slowly and jerkily—Lord was not an expert pilot. It leaned drunkenly from the upright, so that I thought it was going to crash. But the roar was suddenly louder. It lifted, swept above our heads, hurtled northward up the valley. Behind it, when the dust and smoke had cleared, the blackened forms of the two spacemen moved no longer.

The tall man turned, with his gaunt face grimly angular, and watched the life-craft go. It became a vanishing point of bright metal and violet fire. Its thunder rolled away.

His clumsy-seeming weapon lifted, at last, and clicked. "Down, Barstow!" the girl screamed at me. "Cover your eyes."

Astonished to find that I was left standing alone, I dropped. The flash of heat stung my skin. I looked, afterward, in time to see the small bright cloud of iridescent metal vapor fading in the blue northward sky, turning into a white tuft of rising cumulus. The crash came a whole minute later, like one loud peal of thunder.

Enlow shook his lean head, regretfully.

"Too bad it happened that way," he said. "The two guards were only obeying orders. The equalizer might have made them very good members of the Brotherhood."

Calmly, as he spoke, he slipped another little self-propelled missile out of a case at his belt, pulled a safety-key out of it, and pushed it down the muzzle of his launcher. Shaped very much like the huge guided missiles of Fort America, it was only six inches long.

Halfway to his own craft, Mr. Julian Hudd stood peering back toward us. He was shading his eyes, dazedly shaking his dark shaggy head, as if the flash had nearly blinded him.

"Your demonstration, Mr. Hudd!" Cameron shouted after

him, urgently. "Now will you give up your New Directorate?"

"Jim, this is an act of war," his great bellow came back defiantly. "Your damned Brotherhood will feel the consequences."

He went on at a stumbling, laborious run, toward his waiting craft. Frank Enlow was beckoning us imperatively back toward the gully.

"Wait!" Jane Enlow called out, eagerly. "Mr. Doyle is getting through."

She listened again. The gaunt man looked warily back at the enormous bright nose of the cruiser which still loomed. high above the ravine's rim, and speculatively hefted his launcher. I turned to Cameron, puzzled.

"So vou've seen Dovle?"

"Last night." He watched the girl's shining eyes, anxious for the news. "The Enlows live just over the ridge-the first place I found. Their phone began ringing while I was there. It was Rory Doyle. I told him about the equalizer, and he came over to help us stop Mr. Hudd."

Awed, I glanced up at the appalling pillar of the Great Director. "How?"

"The first two landing parties had already got in touch with the Brotherhood," Cameron explained. "They were being indoctrinated with the equalizer. The plan was to send them back to spread the word among the crews. But Hudd pushed his own scheme too fast for that to succeed."

Anxiously, he watched the intent girl.

"The only way left was to try a broadcast. Not quite so good, but I think the signal crews will mostly recognize and trust Rory Doyle. It took a little time to improvise a net of short wave stations strong enough to reach out through the ionosphere to the other ships and the moon."

Suddenly, the eager-faced girl slipped off her single headphone. She held it up between us, twisted a volume-control. gestured for us to listen.

"-specifications of the equalizer." Thinned and small, hoarse with a weary tension, it was the voice of Rory Doyle. "The absolute dimensions, remember, may be varied at will.

It is the proportionate dimensions, and the shape and alignment of the turns, which must be precisely true.

"The safety-coil, remember, must always have a greater number of turns than the primary—otherwise you have a matter-bomb, instead of a power plant. The number and spacing of the secondary turns control the maximum voltage, according to the rule I gave you.

"Now, pass the word along!"

His tiny-seeming voice held a tired elation.

"Membership in the Brotherhood is open to every man of you. Now you are welcome on earth. Mr. Hudd's ill-advised threats will be forgotten. You have nothing to fear—so long as you respect the rights of others. The officers of the Brotherhood wish me to say that you are welcome home."

His voice ceased. The girl took back the headphone, and her father led us up the floor of the rocky little gorge. We stopped, presently, to climb a fern-grown slope and look back across the valley.

The interstellar cruiser still towered out of the smoking forest, incredibly enormous. Nearer, the tiny pencil of Hudd's 'life-craft stood mirror-bright upon a blackened island in the green. Between the fins of it, I saw a doll-like figure—hammering with frantic fists upon the shining valve.

"Mr. Julian Hudd," murmured Cameron, almost with pity. We hurried on. We were crossing the low ridge into the next valley, when the ground quivered. The jets of the cruiser made a deafening, crushing reverberation. The bright immensity of it lifted, on a pillar of terrible fire.

Jane Enlow was listening again, as the thunder faded. "They are going to the shore of the new Sahara Sea," she told us. "A new irrigation project—the crews can take up land, there."

An immense quiet fell upon us, after that thunder had died. I stood apart, staring into the sky, long after the living blue spark of the jets was gone. For the meaning of the equalizer was breaking slowly over me. A wave of deep emotion left me awed and changed and lifted, somehow strong and free.

"What happened to Mr. Hudd?" Cameron was asking. "I don't know." Twisting at the knobs, Jane Enlow looked

pale with concern for him. "The crews wouldn't let him come back on the ship. I'm afraid he was killed in the blast."

Many months had passed, however, before I learned the actual and somewhat surprising fate of Mr. Julian Hudd—who had been Director-General of Europe and Special Secretary of the Squaredeal Machine, and who was still an adaptive and resourceful man.

The following summer, after we had all been inducted into the Brotherhood and taught the equalizer, I came back in answer to a hospitable invitation to visit the home of Frank Enlow. Already I had claimed a small homestead beside a new western sea, and friendly neighbors had helped me build the first rooms of a house there. I wanted to see Jane Enlow.

She wasn't at home, however, when I arrived.

Frank Enlow, the lean ex-janitor and the last friend of Tyler, met me at the door of his pleasant home. He began to talk of Mr. Julian Hudd, who had survived unhurt by the ion-jets of the departing cruiser. He had established himself in the vacant house that had belonged to the murdered Hawkins couple. Frank Enlow took me to see him, there.

Now a simple brother of the Brotherhood, we found Hudd plowing his young orchard. Walking behind a small equalizertractor, he was bare to the waist and brown with sun. Sweat ran in rivulets down his dusty flanks, but his paunch and his jowls and his several chins were no longer the burdens they had been. I scarcely recognized him.

"Glad to see you, Chad." He used my first name, as always, but now his hard handclasp had a genuine cordiality. His great booming voice seemed mellowed, happy. With an air of simple, equalitarian friendship, he invited us into his home.

"Come along, Chad," he urged genially. "You'll want to see the wife. I think you'll remember her—the former Miss Jane Enlow."

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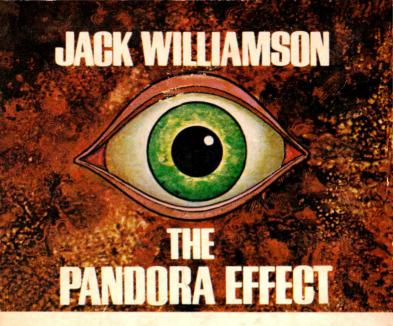
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